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PSYCHOLOGICAL ABSTRACTS

CONTENTS

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AUTHOR INDEX

PSYCHOLOGICAL ABSTRACTS

VOL. IV, NO. 1 JANUARY, 1930

GENERAL

1. **Basov, M. Structural analysis in psychology from the standpoint of behavior.** *J. Genet. Psychol.*, 1929, 36, 267–290.—Investigation of human behavior in its entirety becomes intelligible only as this entirety is considered as determined by reciprocal interactions of its parts. Analysis of human behavior, as interaction between organism and environment, involves determination of (1) the structural elements of the interaction process, (2) the connections and relations between these process-elements, (3) the general architectonic or structural forms of the whole, and (4) the dynamic relations between individual and environment as a whole. External stimuli, both physical and social, and internal stimuli, both organic and experiential, may be classified into (a) the detailed immediate stimuli, (b) their background, and (c) organic predispositions; and, as determiners of behavior processes, they act either as basic, as favorable, as diverting, as complicating, or as destructive determiners. The structural forms of behavior include: a series of disconnected acts, a process of acts determined associatively by the immediately preceding only, a process determined apperceptively by a consistent internal connection from the first and up to the end, and three transitional forms.—*J. F. Dashiell* (North Carolina).

2. **Bentley, M. "Observer" and "subject."** *Amer. J. Psychol.*, 1929, 41, 682–683.—The author discusses the distinction between "observer" and "subject" which has long been recognized by clear psychological thinkers. He urges a consistent and competent use of the two words, the difference between which rests on a difference in the experimental problem, and not on a difference in point of view. —*D. E. Johannsen* (Wellesley).

3. **Bentley, M. Deutsche Gesellschaft für Psychologie.** *Amer. J. Psychol.*, 1929, 41, 689.—The German Society has changed its name (from *Die Gesellschaft für experimentelle Psychologie*) and urges that psychology be better recognized in various German universities. The psychologists who sign the petition point out that many chairs of psychology are filled by philosophers and pedagogues, and they urge that the extension of psychological interest into wider fields of human activity justifies more recognition on the part of the academic authorities. —*D. E. Johannsen* (Wellesley).

4. **Boring, E. G. Ninth International Congress of Psychology.** *Amer. J. Psychol.*, 1929, 41, 684–686.—*D. E. Johannsen* (Wellesley).

5. **Campos, N. Relatorio de uma viagem realizada á Europa para estudos psychologicos.** (Report of a trip to Europe for psychological study.) *Ann. da Colon. de Psychopath.*, 1928, 1, 361–386.—The author reports a trip to the various universities of Europe with the aim of visiting the various laboratories of experimental psychology. A short résumé of work being done at the various institutions is given.—*J. W. Nagge* (Chicago).

6. **Coates, A. A sceptical examination of contemporary British philosophy.** London: Brentano's, 1929. Pp. 256. 10/6.—Coates examines the views of the following English thinkers: C. E. M. Joad, J. Arthur Thomson, W. R. Sorley, C. C. J. Webb, A. E. Taylor, D. Fawcett, J. A. Smith, James Ward, G. Dawes Hicks and G. E. Moore. He finds them all unsatisfactory in various ways.—*F. C. Bartlett* (Cambridge, England).

7. **De Sanctis, S. Üdvözlösorok.** (Greeting.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 266. —Greeting and congratulations from the president of the Italian Society for Psychology to Ranschburg.— *D. E. Johannsen* (Wellesley).

8. **Dewey, J. The quest for certainty.** New York: Minton, Balch, 1929. Pp. 318. $4.00.—The volume, which comprises the Gifford Lectures for 1929, is a study of the relations between knowledge and action. It begins with a genetic analysis of the considerations that have led philosophers to seek certainty (escape from peril, alliance with religious systems, etc.), expounds in some detail the dynamics of scientific knowing, and derives therefrom a generalized theory of the function of ideas in the world. The final chapters are given to the bearing of the instrumental theory upon values and ethical theory in general, and to a consideration of the changes that would be brought about in human life by its adoption. The fundamental thesis, as in the author's earlier formulations, is that ideas, values, hypotheses, etc., are tools for the remodeling of the environment in the direction of more adequate satisfactions, and that they are generated in conflict with problems and tested by the efficacy with which they yield solutions.—*R. R. Willoughby* (Clark).

9. **Dimmick, F. L. Some new auditory apparatus.** *Amer. J. Psychol.*, 1929, 41, 650–652.—Description of an apparatus for producing relatively pure tones over practically the whole auditory range, by means of two vacuum tube oscillating circuits. A complete series of gradations in intensity is obtained by means of a potentiometer.—*D. E. Johannsen* (Wellesley).

10. **Farnsworth, P. R. Proceedings of the meeting of the Western Psychological Association, Stanford University, June 20 and 21, 1929.** *Psychol. Bull.*, 1929, 26, 589–599.—*J. F. Dashiell* (North Carolina).

11. **Fritz, M. F. An apparatus for measuring the reaction-time of white rats to noise.** *Amer. J. Psychol.*, 1929, **41**, 649.—An apparatus which permits the measurement of a rat's reaction-time by means of any standard chronoscope or chronograph with either a make or break circuit. The author believes that this apparatus, besides measuring the rat's reaction-time, will prove useful in testing the effects of drugs and diets, of training and fatigue, etc. His experience with it indicates that it will measure more delicately and accurately the influence of these factors upon the nervous system and organic condition of the animal than either the maze or the problem-box.—*D. E. Johannsen* (Wellesley).

12. **Guimaraes, O. O laboratorio de psychologia.** (Concerning the psychological laboratory.) *Ann. da Colon. de Psychopath.*, 1928, **1**, 387–415.—The author deals with the history of the foundation and the activity of the psychological laboratory. A résumé is included of the equipment and work of the psychological laboratory at the psychopathic clinic of Rio de Janeiro.—*J. W. Nagge* (Chicago).

13. **Harrison, G. R. Instruments and methods used for measuring spectral light intensities by photography.** *J. Opt. Soc. Amer.*, 1929, **19**, 267–316.—Includes heterochromatic photometry, devices for changing intensity non-selectively, and an extensive bibliography.—*D. B. Judd* (Bureau of Standards).

14. **Hill, D. S. Control of psychology in state universities.** *Psychol. Bull.*, 1929, **26**, 600–606.—"The present-day control of psychological departments and courses in tax-supported universities of the United States is becoming a question of peculiar significance because ethical, academic, and financial issues are involved." Results of a questionnaire are given.—*J. F. Dashiell* (North Carolina).

15. **Hull, C. L. An instrument for summating the oscillations of a line.** *J. Exper. Psychol.*, 1929, **12**, 359–361.—An instrument is described for measuring curves of irregular outline such as kymograph tracings and the like. It is called a linear oscillometer, and is derived from the principle of the planimeter. The oscillatory movements of a vertical line are transmitted to two graduated wheels of the work adder type, each of which registers one of the components of the irregular vertical line.—*S. Renshaw* (Ohio State).

16. **Katz, D. Ein Apparat für medizinische Unterrichtszwecke und für Eignungsprüfungen.** (An apparatus for medical instruction purposes and for aptitude testing.) *Indus. Psychotechn.*, 1928, **5**, 370–371.—A simple device is described which has proved useful in testing for sensitivity to vibrations as related to percussion technique in medicine.—*A. W. Kornhauser* (Chicago).

17. **Lewis, C. I. Mind and the world order.** New York: Scribner's, 1929. Pp. 460. $3.00.—The main problem of the book is to define the place of the "a priori" in experience. The author defends the following principal theses, in developing his position which he has named "conceptualistic pragmatism": (1) The two elements to be distinguished in knowledge are the concept, which is the product of the activity of thought, and the sensuously given, which is independent of such activity. (2) The concept gives rise to the a priori; all a priori truth is definitive, or explicative of concepts. (3) The pure concept and the content of the given are mutually independent; neither limits the other. (4) Empirical truth or knowledge of the objective arises through conceptual interpretation of the given. (5) The empirical object denoted by the concept is never a momentarily given as such but is some temporally extended pattern of actual and possible experience. (6) Hence the assignment of any concept to the momentarily given (which is characteristic of perceptual knowledge) is essentially predictive and only partially verified. There is no knowledge merely by direct awareness. (7) Actual experience can never be exhaustive of that pattern, projected in the interpretation of the given, which constitutes the real object. Hence all empirical knowledge is probable only. (8) The mutual independence of the concept and the given, and the merely probable character of empirical truth are entirely compatible with the validity of cognition. Several appendices are added to the book in one of which, on "Mind's Knowledge of Itself," he argues that it is only because mind has entered into the structure of the real world which we know and the experience of every day that analysis or any attempted knowledge may discover it. "We learn the existence and nature of thought, as we learn the nature and existence of anything else, through the difference that it makes in experience."—*A. G. Bills* (Chicago).

18. **Ley, A. A mon cher et eminent collegue P. Ranschburg.** (To my dear and eminent colleague, P. Ranschburg.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 264–265.—Greetings and congratulations are extended Ranschburg on the 25th anniversary of the founding of the laboratory for clinical pedagogy.—*D. E. Johannsen* (Wellesley).

19. **Liggett, J. R. A convenient sectional maze.** *J. Genet. Psychol.*, 1929, **36**, 469–473.—A maze built of variable sections for use with white rats.—*J. F. Dashiell* (North Carolina).

20. **Luria, A. R. [On a system of behavior psychology.]** *Psikhologia*, 1928, **1**, 53–65.—Contemporary psychologists agree as a whole that psychology studies human behavior. Behavior is to be regarded as a system of unstable equilibrium between the organism and the environment which makes use of reactions continually to restore that equilibrium. The relations between the organism and the environment become ever more and more complicated, not only the latent periods but also the directions and the configurations of the reactions change, and qualitatively new forms appear. To ignore these new forms means to commit the error of primitive mechanical attempts of reducing human behavior to isolated units, be they sensations, ideas, or reflexes. The accounts of the reflexologists are inadequate as they approach such complex processes as thoughts and emotions. A table and a characteri-

zation of various stages of behavior (reflexive, instinctive, conditioned, automatized, intellectual, and affective) are given.—*H. S. Razran* (Columbia).

21. **Manuel, H. T. Master of my fate.** New York: Century, 1929. Pp. ix + 329. $3.00.—The purpose of this book is "to assist in the development of personality and behavior." It offers practical advice upon physical and mental health, personal appearance, religious adjustment, and traits of social expression and social adaptability.—*D. Katz* (Princeton).

22. **Newhall, S. M. A silencer for laboratory keys.** *Amer. J. Psychol.*, 1929, **41**, 646–647.—A description of a silent contact which can be substituted for the ordinary contact of an electric key. The contact is made of sheet platinum attached to the center of a spring brass strip; a rubber cushion contained within the frame absorbs the vibration of impact. The silencer is adapted to laboratory circuits of small inductance and current such as are commonly used to operate a relay or electromagnetic recorder. A test of its audibility proved that by making or breaking the circuit through the coils of a 20 ohm or 175 ohm relay, the limit of audibility was of the order of 50 cm. when the key was operated without special care of 10 cm. when the manipulation was rather slow.—*D. E. Johannsen* (Wellesley).

23. **Piéron, H. Principles of experimental psychology.** (Trans. by J. B. Miner.) New York: Harcourt, Brace, 1929. Pp. viii + 190. $3.75.—Translation of *Psychologie Experimentale* (see II: 828).—*C. H. Graham* (Clark).

24. **Renshaw, S. A triple-duty single magnetic marker.** *Amer. J. Psychol.*, 1929, **41**, 649–650.—Description of a single, fork-controlled, magnetic marker, which indicates the time between the make and break and records in hundredths of a second the interval between these points on a single line on a kymograph.—*D. E. Johannsen* (Wellesley).

25. **Ruckmick, C. A. Additional improvements of the Sanford chronoscope.** *Amer. J. Psychol.*, 1929, 41, 652.—Three additional suggestions are made for making the Sanford chronoscope still more dependable and convenient. They are: (1) The replacement of the main hexagonal adjusting-nut with a knurled thumbscrew, making possible micrometer adjustments, if it carries on its upper surface punch-marks in divisions of tenths of the circumference; (2) a slotted and hinged arm with slight spring pressure at the hinge attached on the side of the upright support proximal to the pendulums, for keeping the bobs in the vertical position when the chronoscope is moved; and (3) the making of the pendulum-rods of hard rolled sheep-brass to further reduce the air resistance.—*D. E. Johannsen* (Wellesley).

26. **Scott, T. C. An improved form of stylus maze.** *J. Genet. Psychol.*, 1929, **36**, 489–490.—Description of a maze in which retracings are prevented by "drop-offs" in the floor.—*J. F. Dashiell* (North Carolina).

27. **Sperber, M. Alfred Adler, der Mensch und seine Lehre.** (Alfred Adler, the man and his science.) München: Bergmann, 1926. Pp. 33.—The booklet gives a brief account of Adler's life: his personality, his youth, his position in his family, his studies, his connections with Freud. It shows that Adler never has been a pupil of Freud, but merely an independent cooperator for a few years. Adler's science is presented rather briefly.—*H. M. Bossard* (Clark).

28. **Vidoni, G. Ricordando Enrico Morselli.** (In memory of Enrico Morselli.) *Arch. ital. di psicol.*, 1929, **7**, 161–164.—An appraisal of the life work of Morselli, of his contributions to science and therapy. Morselli has published about 146 papers in the field of psychiatry, 42 in scientific philosophy, 72 in anthropology, 63 in medicine and neuropathology, 60 in psychology, 60 in forensic psychiatry and legal medicine, and 50 on sociological and educational questions.—*H. Klüver* (Behavior Research Fund).

29. **Washburn, M. F. Social Science Research Council's grants-in-aid.** *Amer. J. Psychol.*, 1929, **41**, 688–689.—A note mentioning the psychologists who received support from the Council for experimental projects.—*D. E. Johannsen* (Wellesley).

30. **Watson, F. R. Sound-generators.** *Int. Crit. Tables*, 1929, **6**, 453–457.—Apparatus.—*C. H. Graham* (Clark).

31. **Zener, K. E., & Wever, E. G. A multiple-choice apparatus.** *Amer. J. Psychol.*, 1929, **41**, 647–648.—The authors describe an apparatus of the multiple-choice variety for use in the beginning experimental laboratory. The arrangement consists of a series of 12 1-inch holes, through one of which S is required to put his finger to operate a key on the other side. If the choice is "wrong" a shock results; if "right" the current is short-circuited. The apparatus is reasonable in price and easy to construct.—*D. E. Johannsen* (Wellesley).

[See also abstracts 273, 429, 438.]

SENSATION AND PERCEPTION

32. **Achelis, J. D. Geruchsstudien.** (Studies of olfaction.) *Arch. f. d. ges. Psychol.*, 1929, **71**, 273–338.—This article is a record of experimentation carried on for the purpose of analyzing the odor sense. A group of 8 subjects was used, and for material a number of phials containing a variety of substances. Detailed notes were kept on the identification and description given in each case. The author demonstrates that the sense of odor is a much more complex experience than a simple pleasure or annoyance reaction. There is no clear odor memory. One can not recall perceptual experiences but one is dependent upon them. This fact coupled with the impossibility of perceiving two odors simultaneously makes comparison of odor perception impossible. It is significant that we have no vocabulary in the field of odor, but use the vocabulary of other senses for description. The author detects

three dimensions to odor; its complexity of structure, its spatiality, its subjectivity. He suggests that his findings point to an agreement with recent studies leading to the belief that there is no clear localization of brain areas for the various senses, but recognizes the need for further experimentation for final acceptance of this fact.—*A. B. Herrig* (Central State Teachers College).

33. **Adler, F. H. A comparative study of the rôle of pigment in the physiology of vision.** *Arch. Ophth.*, 1928, **57**, 346–360.—Phylogenetic, anatomical and physiological evidence is offered supporting the view that the pigment epithelium of the eye is the primary site of the transformation of light energy and that the rods and cones are end organs stimulated by the adjacent photochemical or photoelectric changes. 33 references.—*C. W. Darrow* (Behavior Research Fund).

34. **Adrian, E. D., & Matthews, R. The action of light on the eye. III. The interaction of retinal neurones.** *J. Physiol.*, 1928, **65**, 273–298.—When the entire retina of the conger eel is exposed to uniform illumination the action current discharge in the optic nerve may lose its usual irregular character and may consist of a series of regular waves at a frequency between 5 and 15 a second. Hence the ganglion cells of the retina must all be working in unison with alternating periods of rest and activity. There is strong evidence that the rhythmic discharges are due to nervous interconnection between the ganglion cells, and not to intermittent stimulation of the rods and cones. The nature of the nervous connections in the retina is discussed. They are found to have many of the properties shown by the gray matter of the C. N. S.—*H. Banister* (Cambridge, England).

35. **Agatatston, S. A. Fundus as a definite index to arterial disease with analysis of 100 cases.** *Arch. Ophth.*, 1928, **57**, 386–392.—The author believes that sclerosis of the arterioles of the kidney and brain cannot exist in the absence of a similar condition in the retinal arteries. Accepting this view, the diagnostic value of ophthalmoscopic examination is obvious. Cases to be reported later.—*C. W. Darrow* (Behavior Research Fund).

36. **Angyal, A. Einige Beobachtungen über raumhafte Tastphänomene.** (Observations on touch perception of space.) *Arch. f. d. ges. Psychol.*, 1929, **71**, 351–356.—Angyal makes contributions to Katz's analysis of the touch sensations, with which he agrees in the main, but in which he finds significant omissions. Katz recognizes three phenomena: (1) A sensation of continuous, unbroken surface, as when the hand is passed lightly over a surface. (2) An intervening space recognition, as when a harder substance underlies a softer material. (3) A space-filling sensation, as when a stream of air strikes the body. Angyal adds to the second of these his observation that consistency of the material giving touch stimuli can be discriminated when a harder substance underlies a softer material. And that such touch sensation differentiates when lack of homogeneity exists in the surface of the stimulus-giving material. Also he observes that the dynamic factor, i.e., movement within the touch material, is sensed. These Katz has failed to analyze in his presentation in this field.—*A. B. Herrig* (Central State Teachers College).

37. **Banerjee, M. N. Monocular estimation of short distances.** *Indian J. Psychol.*, 1929, **4**, 104–113.—The report of a class laboratory experiment in estimation of distances monocularly. With distances of 5 cm. and 10 cm. more accurate estimations are made with the right eye, whereas the distance of 25 cm. is better judged with the left eye.—*F. A. Geldard* (Virginia).

38. **Beivie, V. Nagra ord om möjligheten att förebygga hörselnedsättning och dövhet.** (Suggestions for the prevention of defective hearing and deafness.) *Svenska läkart.*, 1929, 1193–1202.—A program to prevent and control defective hearing should include the following provisions: An intensive study of the hereditary basis of some types of deafness and hearing defects. An emphasis, in the training of obstetricians, on the danger to the ear of the child of prolonged labor, and the need for immediate cleansing of the ear and the nasopharynx of the new-born, also the desirability of elevating the head of the new-born to permit ear infections to drain. Such a program should include better industrial hygiene to protect the ear of the worker. The medical profession in the army and navy should give greater attention to the danger to hearing from detonation of explosives, and develop a means for protection.—*C. T. Pihlblad* (Wittenberg).

39. **Brown, A. F. The relation of heterogeneous and homogeneous chromatic stimuli in the range of visual apprehension experiment.** *Amer. J. Psychol.*, 1929, **41**, 577–594.—Continuing the series of studies on the three levels of apprehension, the present experiment investigates the influence of homogeneity and heterogeneity of chromatic stimuli on the range of apprehension. The 4 primary colors (Hering papers), discs 6.5 mm. in diameter pasted on white backgrounds, were exposed in a Whipple tachistoscope for 37.5 σ. The number of dots on a card varied from 3 to 13. In the homogeneous series only cards containing dots of one color were used; the heterogeneous series consisted of cards containing dots of two or more colors on a single card. The results show that the statistical limens are lowest for Y, next for R and B, and highest for G. Heterogeneity of stimuli reduces the limens most for "mediate" and least for "unit" apprehension; Y appears to be a factor in the reduction of the limens, though to what extent has not been determined. The introspective reports indicate a certain equivocality in the functioning of the three categories of apprehension, the "grouped" category being most equivocal and the "immediate" least.—*D. E. Johannsen* (Wellesley).

40. **Bush, H. D. Color vision tests.** *Med. J. & Rec.*, 1929, **130**, 184–185.—Unsuspected color weakness and color ignorance were shown by subjects look-

ing at 18 different tones and shades (illuminated by a small light in a " suitably darkened room "), for which phenomena " no existent color theory can be accepted."—*R. C. Givler* (Tufts).

41. **Cole, L. E. The localization of tactual space: a study of average and constant errors under different types of localization.** *Genet. Psychol. Monog.*, 1929, **5**, 339–450.—This investigation attempted to measure the accuracy and errors in localization on various bodily surfaces; to discover any directional tendencies and constant errors; and to test the various theories that have been proposed to explain such tendencies. Eight areas were selected for stimulation: dorsal and volar surfaces of the left forearm, right- and left-knee surfaces, dorsal surface of the right forearm, tips of middle fingers of right and left hands, and the central portion of the forehead. Besides Weber's second method, the progressive method, the three-point stimulation method, and the method of limits were used. For localization Weber's second method, a " glass-plate " method, Pearce's method, and a " verbal-report " method were used. Localization was further studied under various forms of maximum, minimum, and unfamiliar movements and under various postural conditions. When Weber's second method was applied to the eight bodily surfaces only four yielded reliable constant errors, whereas the other four points yielded values of such great variability that they were believed to be unreliable. With the glass-plate method there was a noticeable decline in accuracy. This decreased accuracy is believed to obviate the possibility that the constant errors on the skin surface can be attributed to the localization movement. Other experiments bearing on this question lend further evidence to this assumption. The localization movements themselves are, however, believed to be affected by movements of other bodily segments and by the general bodily posture. The use of several stimulus points within a single surface caused a decline in accuracy in both Weber's method and the glass-plate method. Progressive stimulation served to exaggerate the tendencies observed with normal stimulation. Reversing the polarity of the forearm surface did not influence the skin-surface errors. When a verbal report was substituted for the localization movement, a stimulation of the forearm surface gave rise to wristward errors. The localization threshold was not found to change signficantly with practice. In general, movements from right to left tended to be long; whereas movements along the bodily axis, whether of flexion of extension up or down, tended to fall short.—*P. H. Ewert* (Vermont).

42. **Cushing, H., & Bailey, P. Hemangiomas of cerebellum and retina.** *Arch. Ophth.*, 1928, **57**, 447–463.—Hemangiomas of the retina are frequently associated with cyst of the cerebellum. 18 figures and 33 references.—*C. W. Darrow* (Behavior Research Fund).

43. **Derby, G. S., Chandler, P. A., & Obrien, M. E. The light sense in early glaucoma.** *Arch. Ophth.*, 1929, **58**, 692–703.—A decreased ability to discriminate light intensities and a subnormal rate of dark adaptation commonly precede the more easily recognized symptoms of glaucoma. 2 figures. 23 references.—*C. W. Darrow* (Behavior Research Fund).

44. **Dimmick, F. L., & Sanders, R. W. Some conditions of the perception of visible movement.** *Amer. J. Psychol.*, 1929, **41**, 607–616.—The problem of this experiment was the investigation of two factors, i.e., the length of the temporal interval and the intensity of the stimulus, and their effect on the phenomenon of visible movement. The time intervals used were 0, 30, 60, and 90σ; the three intensities are described as a " brilliant white," a " good white," and a " dull white." O's instructions were to describe the visual perception as completely and accurately as possible. In general, it was found that the shorter time intervals give simultaneity, the longer ones succession, and the intermediate ones movement, but when the instructions were changed to read, " You will be shown a stimulus which may or may not arouse a perception of movement. State whether you perceive movement," the percentage of perceptions of movements for all O's is more than doubled. The first type of report is called the " apprehension of movement " and the latter the " inference of movement." The frequency of optimal movement varies with the intensity of the stimulus, the percentage of cases of optimal movement at 30σ and 60σ time interval being increased by an increase in the intensity of the lights, but the result is not univocal. The descriptive reports of the sensory carrier of visible movement verify the previously reported " gray flash." In conclusion the authors point out that the conceptual term " visual movement " is not adequately definitive, indicating that there are at least three different phenomena or perceptual patterns.—*D. E. Johannsen* (Wellesley).

45. **Epstein, J. Vibratory sensibility—methods of ascertaining and diagnostic value.** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 418–425.—Changes in vibratory perception (pallesthesia) are valuable diagnostic factors in pathologic conditions involving the central nervous system. Variations in length of time and quality of the perception, and comparisons of one side of the body with its opposite homologue should all be studied. The technique described requires only a small C-128 tuning fork and an ordinary watch. The interpretations given by the author of changes accompanying lesions of different areas are of value in differential diagnosis.—*C. M. Louttit* (Hawaii).

46. **Ewert, P. H. Cutaneous and kinaesthetic space.** *Psychol. Bull.*, 1929, **26**, 570–581.—41 titles are reviewed under the headings: perception of form and size, of length and distance, of movement and speed, of load, of stimuli of different qualities, localization of temperature, of pressure, pain, and tickle, clinical observations, synesthesis, illusions, and theoretical.—*J. F. Dashiell* (North Carolina).

47. **Fletcher, H. Physical aspects of audition.** *Int. Crit. Tables*, 1929, 6, 450–453.—*C. H. Graham* (Clark).

48. **Foley, A. L. Velocity of sound.** *Int. Crit. Tables*, 1929, 6, 461–467.—In different media.—*C. H. Graham* (Clark).

49. **Forbes, W. T. M. A quantitative consideration of the Purkinje phenomenon.** *Amer. J. Psychol.*, 1929, 41, 517–542.—Using the experimental data of several investigators (König, Ives, Gibson and Tyndall, Sloan, etc.) the author attempts to derive the law which expresses the relationship between the relative brightness of the various colors of the spectrum at constant energy and the brightness of the light to which the eye is adapted. Assuming that the sensitivity of the eye is dependent on photochemical processes in the retina (one scotopic and 2, or possibly 3, photopic) which may be represented by a simple, normal probability curve, and that only the relative proportion of the active pigments is changed with adaptation, it is found that the change in sensitivity with changing adaptation can be represented as the sum of these 3 curves; (there is only a doubtful indication of the fourth). The coefficients of the corresponding probability equations and the values of the centers of the absorption curves are given. The fovea cannot be brought into the scheme, but its sensitivity can be almost matched at high brightness by the 2d photopic (G) curve alone, if it were moved about 10μ toward the longer wave-length end of the spectrum; S is negligibly small at all brightness at which the fovea is sensitive, while P_1 (R) appears only at low brightness.—*D. E. Johannsen* (Wellesley).

50. **Freeman, E. An anomaly of foveal color perception.** *Amer. J. Psychol.*, 1929, 41, 643–645.—The problem of the experiment reported in this article was the study of the relationship between the size of the stimulus and distance at which its color could be perceived. It has been proved that for forms a large figure at such a distance as to give a retinal image of the same size as a smaller, nearer figure cannot be so accurately distinguished as the smaller, nearer figure. In other words, the inferences of geometrical optics are not universally applicable. In the present experiment, 5 mm. squares of 5 colors pasted in the center of a gray cardboard 60 mm. square were held at such a distance as to make the color just perceptible. These distances were compared with the distances required to make the color of a 5 cm. square visible. Instead of ratios of 1:10 for the distances of these colors, as strict geometry would require, it was found that the ratios varied from 1:3.3 to 1:7.6 for the different colors. The facts are presented without any theoretical interpretation.—*D. E. Johannsen* (Wellesley).

51. **Freeman, E. Anomalies of peripheral visual acuity.** *J. Exper. Psychol.*, 1929, 12, 324–339.—The writer reviews the history and previous work done upon the Aubert-Foerster phenomenon. This has to do with peripheral visual acuity when small figures and letters are seen at a short distance compared with acuity when large figures and letters are seen at a correspondingly greater distance. Aubert showed that the distance between the object and the fixation point in the case of the large figure could be much less than the strict geometrical proportionality demanded. The large figures suffer a reduction in clarity and elicit a lower degree of acuity of peripheral vision. Heinrich made the lens and its accommodation exclusively responsible. Jaensch was the first to conceive visual perception as a function involving the whole organism, demonstrating that it would not suffice to know the physical factors which govern the production of the ultimate retinal image, at any rate in the case of acuity in the periphery. The method used in Freeman's work is that of Guillery. Freeman finds that with the splitting method the A-F. phenomenon was eliminated and shown to be no more than a function of method. The splitting method brought out a reversal of the situation existing in the A-F. of the translation method. Here the large stimulus revealed an enormous advantage in acuity over the small. Freeman raises the question, what will happen when the splitting method is used with instantaneous illumination? By the use of a technique of his own he found that no quantitative discrepancies occurred between the two different sized constellations, and both must be allowed to have been equally well resolved. Thus he says we have a coincidence with the inference of geometrical opties that identical retinal images, regardless of size and distance of the external objects, should be resolved equally well in the same retinal spot.—*S. Renshaw* (Ohio State).

52. **Freeman, G. L. An experimental study of the perception of objects.** *J. Exper. Psychol.*, 1929, 12, 340–358.—"The perception of a nonsense form (ink blots) passes through three stages or levels of development. On the first level is determined the general extent of the form. This is predispositional in character. The second level serves to generate thing-ness, and the third level recognizes the thing as object." "Bodily reactions of the observer provide the context or meaning of what the organism is doing." The method employed by the investigator is described as that of "inspection and commentary."—*S. Renshaw* (Ohio State).

53. **Gamble, E. A. McC. The psychology of taste and smell. Status of 1929.** *Psychol. Bull.*, 1929, 26, 566–569.—20 titles are reviewed. Henning's prism has not yet been substantiated. A few studies have been made along other lines in the two sense fields.—*J. F. Dashiell* (North Carolina).

54. **Gatti, F. Imagini consecutive tridimensionali a cromatismo antagonistico.** (Tri-dimensional negative after-images.) *Arch. ital. di psicol.*, 1929, 7, 138–152.—Experiments on 21 adults and six children showing that tri-dimensional after-images of solid objects may be obtained. The behavior of these tri-dimensional after-images is described in considerable detail and it is asserted that the criterion of corporeity cannot be used in distinguishing after-images and eidetic images. Gatti believes that

Jaensch has used this criterion in defining eidetic imagery. 2 figures and 2 tables.—*H. Klüver* (Behavior Research Fund).

55. **Goldstein, I., & Wexler, D. The preretinal artery.** *Arch. Ophth.*, 1929, **58**, 424–434.—A study of an instance of an arterial loop within the vitreous humor. 11 figures. 12 references.—*C. W. Darrow* (Behavior Research Fund).

56. **Griffith, C. R. Vestibular sensations and the mechanisms of balance.** *Psychol. Bull.*, 1929, **26**, 549–565.—70 titles are reviewed. Studies of experiences attending vestibular stimulation tend to show inadequacies or inaccuracies in these experiences. The effect of repeated turnings as reducing nystagmus, whether during or following rotation, has been confirmed in all recent work. Attempts at neurological interpretations of this effect have been inconclusive. Head posture, vision, age, weight, and other non-rotation conditions that affect nystagmus have been studied; and special attention has been given to thresholds of rotation and to compensatory eye-movements. Studies of static rather than dynamic aspects of posture have involved use of surgical methods frequently but not exclusively.—*J. F. Dashiell* (North Carolina).

57. **Guilford, J. P. Illusory movement from a rotating barber pole.** *Amer. J. Psychol.*, 1929, **41**, 686–687.—The author believes that eye-movements are responsible for the three different patterns of movement which may occur when a revolving barber-pole is observed.—*D. E. Johannsen* (Wellesley).

58. **Guilford, J. P. Ocular movements in the perception of time.** *J. Exper. Psychol.*, 1929, **12**, 259–266.—In order to determine the influence of eye movements an experimental disk containing 16 spokes was rotated under D.C. illumination to avoid stroboscopic effects and the movements of the eye photographed by techniques previously described by the author. The association of the stationary flashes with eye movements was not perfect. The author maintains that two types of interpretation are possible for these phenomena. According to one, there is "a kind of freezing or negation of duration," and according to the other we have "an exaggeration or prolongation of time." There is a physiological basis for either interpretation. If the time experience is not restricted to the focal experience, or even if it is rather a constant attribute of the marginal consciousness, then the eye movements have produced a local rather than a general distortion of time.—*S. Renshaw* (Ohio State).

59. **Guilford, J. P., & Helson, H. Eye-movements and the phi-phenomenon.** *Amer. J. Psychol.*, 1929, **41**, 595–606.—An experiment is reported which attempted to verify the contention of Higginson and others that the explanation of the phi-phenomenon is to be found in eye-movements. The eye was photographed during the observation of stimuli, some of which gave rise to the phi-phenomenon and some of which did not. In spite of reports of eye-movements, strain and kinesthesis, the corresponding photographic records show no evidence whatever of eye-movements of such significance either in amount or direction to correlate with seen movement. It is also pointed out that any explanation of the phi-phenomenon which is to be considered justifiable must take account of the auditory and tactual movements from stationary stimuli as well as the visual.—*D. E. Johannsen* (Wellesley).

60. **Hecht, S. Visual acuity and illumination.** *Arch. Ophth.*, 1928, **57**, 566–573.—The resolving power of the retina varies with illumination. Since this resolving power depends upon the number of active sensitive elements per unit area, the writer assumes either that the number of structural elements changes or that the number of those which are functioning varies with the amount of light. Evidence shows that if the thresholds of the rods and cones with respect to illumination are represented by two overlapping bell-shaped curves, the variations in brightness discrimination are adequately accounted for. Since Koenig has demonstrated 572 discrete discriminable steps in intensity and since about 30 of these are mediated by the rods, there must be at least 542 cones in any unit foveal area giving the complete range of intensity discrimination. The smallest retinal area responsive to all intensities is 0.04 sq. mm. Since there are 13,500 cones per sq. mm., it appears that such an area unit must contain 540 cones. Furthermore, if it is assumed that there are three kinds of color sensitivity represented by different kinds of cones in each unit area, the number of monochromatic patches discriminable in the spectrum should be about 180. It is significant that various investigators have obtained numbers ranging from 130 to 207. 6 figures.—*C. W. Darrow* (Behavior Research Fund).

61. **Hecht, S. The relation between visual acuity and illumination.** *J. Gen. Physiol.*, 1928, **11**, 255–281.—To explain the direct logarithmic relation between visual acuity and intensity of illumination, it is postulated that the discrete rods and cones of the retina have different thresholds at which they become functional. The thresholds are distributed in a statistical manner similar to that of other populations. In addition the rods as a whole have thresholds lower than the cones. This is related to the fact that in slight illumination, visual fixation is peripheral. "Then at low intensities the increase in visual acuity depends on the augmentation of the functional rod population which accompanies intensity increase; and at higher intensities the increase in visual acuity depends on the augmentation of the functional cone population." Because there are many more cones than rods per unit retinal area, the increase in acuity is faster when the cones become functional. A study of two cases of completely color-blind persons showed that these individuals had only the rod visual acuity.—*D. G. Marquis* (Stanford).

62. **Helsmoortel, J. Les troubles de l'olfaction et du goût.** (The disorders of olfaction and of taste.) *J. de neur. et de psychiat.*, 1929, **29**, 298–301.—A re-

port of the findings in a patient who suffered from a complete anosmia and a partial ageusia as outstanding symptoms of a post-traumatic psychosis.—*H. C. Syz* (New York City).

63. **Holloway, T. B., & Vorhoeff, F. H. Disklike degeneration of the macula.** *Arch. Ophth.*, 1929, **59**, 201–230.—*C. W. Darrow* (Behavior Research Fund).

64. **Karwoski, T. Variations toward purple in the visual after-image.** *Amer. J. Psychol.*, 1929, **41**, 625–636.—An apparatus is described by means of which the phenomena of the visual after-image were investigated under rigidly controlled conditions. The stimuli were spectral colors of four intensities, i.e., 592, 148, 37, and 9.2 photons. The images were projected on white reacting fields of 592, 148, 37, 9.2, and 0 photons brightness. The results show that, although the complementary color was experienced under some of the conditions for all the colors studied, it is more pronounced at the lower intensities. At the higher intensities the characteristic after-image is in terms of red or blue, and usually both. The intensity of the reacting field has a lesser effect, but in general above 4 photons the reacting field has the effect of white, below that it has the effect of black. These results are discussed in the light of color theory and it is found that the color excitation curves, as originally theoretically determined by Helmholtz, more adequately explain the phenomena than do the empirically determined curves. The Bezold-Brücke phenomenon, which describes the hue of spectral lights as a result of change in their brightness, does not fully explain the hue of the after-image.—*D. E. Johannsen* (Wellesley).

65. **Kiesow, F. Del color bruno. (Nota preliminare.)** (On brown color. A preliminary note.) *Arch. ital. di psicol.*, 1929, **7**, 153–160.—T. K. Oesterreich (*Zsch. f. Sinnesphysiol.*, **59**) holds that mixing yellow and black by means of Ostwald's colors, rotating discs or the spectroscope does not result in a blackish-yellow in the way that mixing blue with green gives a bluish-green. The darkening of yellow does not produce brown but a "second green," a specific green which is not represented in the tridimensional color-scheme. Kiesow does not accept this interpretation but argues that the "second green" is a product of psychic synthesis based on yellow-green. The mixture of pure yellow with black or different grays gives the different varieties of brown.—*H. Klüver* (Behavior Research Fund).

66. **Kirby, D. B., Estey, K., & Tabor, F. Cultivation of lens epithelium in vitro.** *Arch. Ophth.*, 1929, **59**, 358–365.—A study of conditions affecting the growth of embryonic lens epithelium in vitro. 5 references.—*C. W. Darrow* (Behavior Research Fund).

67. **Knapp, A. Retinal degeneration in macular region without cerebral symptoms.** *Arch. Ophth.*, 1929, **59**, 311–347.—*C. W. Darrow* (Behavior Research Fund).

68. **Kronfeld, P. C. The regeneration of the aqueous humor.** *Arch. Ophth.*, 1929, **59**, 231–240.—*C. W. Darrow* (Behavior Research Fund).

69. **Langfeld, H. S. Synesthesia.** *Psychol. Bull.*, 1929, **26**, 582–585.—10 papers reviewed include experimental and theoretical studies, mostly of colored hearing. Various interpretations of the phenomena relate it with "inner vision," with kinesthetic factors of normal type, with eidetic imagery, with congruity of emotional responses, etc.—*J. F. Dashiell* (North Carolina).

70. **Mauthner, O. Über einige psychogene beziehungsweise psychogene-organische Symptome im Bereiche des Kehlkopfes und Rachens, der Nase und des Gehörorgans.** (Concerning some psychogenic or psycho-organic symptoms in the regions of the thyroid, pharynx, nose and ears.) *Monatsschr. f. Ohrenhk.*, 1928, **62**, 1064–1074.—The writer describes numerous cases of patients complaining of a variety of symptoms in the throat, nose, and auditory apparatus, for which he was unable to discover any adequate physiological cause. He assumes that in such cases there must be a neurotic or psychovasomotor basis for the disorders. These are problems for the neurologist.—*J. D. Larson* (Institute for Juvenile Research).

71. **Maxwell, R. S. The quantitative estimation of the sensation of colour.** *Brit. J. Psychol.*, 1929, **20**, 181–189.—This investigation was undertaken to throw light on the relationship between the angular percentage of red and white on a color wheel and the mental estimate of the position of the resulting pink on a scale of redness. The subjects, 35 in number, were boys of average age, 15.8. There was a general tendency to underestimate the amount of red present; the underestimation increased as the color became lighter.—*H. Banister* (Cambridge, England).

72. **Musatti, C. L. Sulla "plasticità reale" stereocinetica e cinematografica.** (On stereokinetic and kinematographic "real plasticity.") *Arch. ital. di psicol.*, 1929, **7**, 122–137.—Comparing the plasticity or corporeity as observed in stereokinetic phenomena (Benussi) with the corporeity of solid objects viewed binocularly, the author finds that the stereokinetic plasticity has the essential characteristics of the plasticity of solid objects.—*H. Klüver* (Behavior Research Fund).

73. **Pattie, F. A., Jr. A further experiment on auditory fatigue.** *Brit. J. Psychol.*, 1929, **20**, 38–42.—In these experiments the subject was "fatigued" by listening for one minute (a) with one ear to a given tone, and (b) with both ears to the same tone. In the latter case, however, the subject thought that only one ear was being stimulated, the relative phases at the ears being such that the tone was heard wholly to one side. The results, with three subjects, showed that the binaural stimulation did not produce any differential intensity fatigue. There is ground for believing that the seat of intensity fatigue is peripheral and not central.—*H. Banister* (Cambridge, England).

74. **Reiter, B. Untersuchungen über die Abhängigkeit der Messgenauigkeit von der künstlichen Beleuchtung.** (Investigations of the dependence of accuracy in measurement on artificial illumination.) *Indus. Psychotechn.*, 1929, **6**, 25–47.—The author carried on a series of experiments to determine the effect of lighting on his ability to bring two lines of a measuring instrument into coincidence by means of a thumb-screw. Scales of different colors and materials were used. Special interest lay in determining the influence of the distribution of light. The interpretations sought were in terms of momentary and general adaptation. The experimental conditions included various intensities of direct lighting after darkness adaptation, indirect lighting in a white room, indirect and direct lighting combined, and colored lights. The first four of the ten conclusions follow: (1) The greatest accuracy was achieved with completely indirect illumination of high intensity. Results differ somewhat for the different metals of which the scales were made. (2) Medium intensities were satisfactory with semi-indirect lighting. (3) Direct lighting is advantageous only if one is limited to lights of very low intensity. (4) Low intensities resulted in longer reaction time as well as less accuracy.—*A. W. Kornhauser* (Chicago).

75. **Richardson, L. F. Quantitative mental estimates of light and colour.** *Brit. J. Psychol.*, 1929, 20, 27–37.—Subjects were required to estimate, quantitatively, the redness of a pink paper when seen (1) as a triangle against a background of white and red and (2) on a color wheel with a red center on a white background. Of over 230 subjects whose ages varied from 17 to 77, only 5 found the task impossible. Women, as a rule, marked the pink more red than the men. This difference is being explored further, and many possible causes for this variability are discussed.—*H. Banister* (Cambridge, England).

76. **Ruffer, W. Über die Beeinflussung menschlicher Leistungen durch farbiges Licht.** (The influence of colored light on human performance.) *Indus. Psychotechn.*, 1928, **5**, 161–177.—Tests for acuity and speed of vision and for simple visual-manual performance were conducted with 12 subjects under a number of different conditions of lighting. In the case of general illumination little relation was found between color of the light and performance. With localized illumination, at the work place, performance was best for yellow and green light and worse for blue and daylight (daylight lamps). Red light gave varying results. Differences were less marked when general and local lighting were combined.—*A. W. Kornhauser* (Chicago).

77. **Sabine, P. E. Transmission, reflection, reverberation and absorption of sound.** *Int. Crit. Tables*, 1929, **6**, 458–460.—*C. H. Graham* (Clark).

78. **Sharpey-Schäfer, E. The effects of de-nervation of a cutaneous area.** *Quar. J. Exper. Physiol.*, 1928, **19**, 85–107.—Previous experiments on sectioning nerves supplying cutaneous areas have seldom completely de-nervated the area. This is due to the fact that the overlap of nerve supply has not been considered. The palmar aspect of the little finger is an area making complete de-nervation possible. The branch supplying the radial side was cut, the branch supplying the ulnar side was crushed by squeezing. The second operation occurred nine weeks after the first. Recovery from the first operation is incomplete eighteen months after section; after crushing complete recovery was manifest in four months. The nature of regeneration in the cut and sectioned nerve accounts for this time difference. Pain sensations are first experienced in the course of recovery, but pain is not an early sense to be developed in evolution, the author holds. Increased pain sensitivity was noted during recovery, but there is no new nervous system involved. The " protopathic fibers " of head are nothing but pain fibers. A partially de-nervated area exhibits phenomena different from those of a completely de-nervated area. This fact has been lost sight of by those who have studied sensory experience from partially de-nervated areas in previous experiments. Observations are recorded on experiences immediately following nerve-severance, and upon vascular conditions, and upon the growth of the nail.—*L. Carmichael* (Brown).

79. **Shoenberg, M. J. The artificial induction of ocular hypertension by compression of the jugular veins.** *Arch. Ophth.*, 1929, **59**, 681–691.—As measured by the tonometer, many persons show an increased intra-ocular tension following pressure on the jugular veins. 13 references.—*C. W. Darrow* (Behavior Research Fund).

80. **Tennant, J. The psychological factor in color contrast.** *Brit. J. Psychol.*, 1929, **20**, 1–26.—Experiments of Helmholtz, Hering, McDougall and Allen on color contrast are discussed and the results of modifications of certain of their experiments are described. It appears that the physiological factor is really operative. This is sufficiently explained by Rollet's theory of inhibition. At the same time psychological factors are present: in particular the principle of the recognition of the normal color and the principle of the relativity of our perception of visual effects and our uncertainty as to absolute hue.—*H. Banister* (Cambridge, England).

81. **Tinker, M. A. The influence of letter position on range of visual apprehension—a reply to Dr. Crosland.** *Psychol. Bull.*, 1929, **26**, 611–613.—*J. F. Dashiell* (North Carolina).

82. **Trimble, O. C. The relative rôles of the temporal and the intensive factors in sound localization.** *Amer. J. Psychol.*, 1929, **41**, 564–576.—In view of the conflicting evidence on the relative importance of the phase, time, and intensity relations of a binaurally perceived tone in determining its localization, this experiment was made to determine specifically the relative importance of the two latter relationships. The discrete impulse technique and high-pitched sounds were used; stimuli were delivered 6 cm. from the ear. Time-differences in terms

of σ, and intensity differences in terms of relative resistances of the two circuits were presented. The results show that: (1) on the basis of intensive differences, with discrete sounds as stimuli, the localization is continuous and more or less uniform; (2) on the basis of temporal differences the localization changes continuously and regularly though somewhat more slowly than with intensive differences; (3) when localization is conditioned by both factors it is more difficult to judge. In summary, though both time and intensity condition localization, intensity is the more effective factor; the facts seem to support the "difference-pattern" theory of sound localization.—*D. E. Johannsen* (Wellesley).

83. **Vernon, M.D. The relationship of subjective experience to the performance of eye movements.** *Brit. J. Psychol.*, 1929, 20, 161.—The relationship of introspective data to objective performance was studied in a series of observations upon the accuracy of the performance of eye movements from right to left of the visual field, and their interruption by fixation pauses on a variety of visual obstructions placed in their path. The shorter fixation pauses during which perception and apprehension were partial and vague were not usually cognized; but the longer pauses accompanied by close scrutiny and complete appereception of the visual object were reported. Kinesthetic sensations of ease or difficulty in making the required movements were closely connected with accuracy of performance. This was greatest when the deeply-rooted motor habits of normal reading were operative, and was least when these were inhibited by habits acquired temporarily in the successive fixation of isolated stimuli. The performance, particularly of certain individuals who were characterized by a subjective attitude towards the experiments, was found to be much affected by (a) the meaning and interest of the text and visual obstructions, and by the conflicts and mutual inhibitions of these meanings and interests, (b) perceptual factors connected with the visibility, structural simplicity and ease of apprehension of the visual obstructions.—*M. D. Vernon* (Cambridge, England).

84. **Warren, H. C. A delayed visual after-effect.** *Amer. J. Psychol.*, 1929, 41, 684.—The report of a personal experience which seems to indicate that a vivid positive after-sensation (or image) may appear after an interval of several minutes occupied by sleep and that it develops (changes) in the same order as the original sensory figure. The author is convinced that it is of peripheral origin, i.e., is an after-sensation, not an after-image, because of the distinctness and sharpness of outline.—*D. E. Johannsen* (Wellesley).

[See also abstracts 9, 30, 139, 140, 143, 144, 156, 214, 224, 229, 335, 369, 376, 405, 414, 415.]

FEELING AND EMOTION

85. **Aveling, F. Notes on the emotion of fear as observed in conditions of warfare.** *Brit. J. Psychol.*, 1929, 20, 137–144.—These notes were made in France in 1917 and describe the nature of the emotion of fear, its antecedents and conditions, its immediate and after effects, and methods which were employed in its control.—*H. Banister* (Cambridge, England).

86. **Gruyer, M. Intuition et affectivité.** (Intuition and affectivity.) *Psychol. et vie*, 1929, 3, 183–185.—*Math. H. Piéron* (Sorbonne).

87. **Harris, A. J. An experiment on affective contrast.** *Amer. J. Psychol.*, 1929, 41, 617–624.—The author reports the results of an experiment which attempts to determine whether the law of affective contrast as formulated by Washburn or the law of affective equilibrium as formulated by Beebe-Center is the more accurate. The results of the experiment indicate that the second is the more adequate formulation, at least insofar as colors are concerned, and the affective value of a series is changed in accordance with the law of affective equilibrium: "The affective value of the experiential correlate of a stimulus varies conversely with the sum of the affective values of those experiences preceding this correlate which constitute with it a unitary temporal group."—*D. E. Johannsen* (Wellesley).

[See also abstracts 117, 199, 235, 279, 286, 377, 403.]

ATTENTION, MEMORY AND THOUGHT

88. **Bénézé, G. L'abstraction.** (Abstraction.) *Psychol. et vie*, 1929, 3, 137–141.—Abstraction is an operation of judgment demanding a clear awareness of the phenomenon to be studied. While maintaining the phenomenon as a whole, abstraction must form a hierarchy of the elements, centering around that element which is momentarily considered as the most important. An abstraction with regard to a whole ought always to be completed by another abstraction with regard to the same whole. Knowledge is enriched to the degree that viewpoints are numerous and well coordinated. Verbal expression of this coordination forms scientific law.—*Math. H. Piéron* (Sorbonne).

89. **Bills, A. G., & Brown, C. The quantitative set.** *J. Exper. Psychol.*, 1929, 12, 301–323.—The problem was to determine to what extent an individual's efficiency is influenced by the amount of work with which he is faced. The element of recognizing this amount constitutes for the authors the quantitative set. Two sets of experiments were made to measure the extent of the influence of quantitative set: (1) under both work and time limits and (2) without differentiating these. The criterion of efficiency used throughout the investigation was speed, measured by number of examples done per unit of time in minutes or quarter minutes. The work consisted of adding pairs of digits arranged in continuous rows on a sheet of paper, and the answers were written by the subject on the sheet immediately under the digits. A row contained 45 examples. Beneath the sheet containing the examples five thin sheets of paper with carbon papers between were used to measure the degree of tension in order that the investigators might have some measure of the relation between tension, speed, decrement, and the like. The writers conclude that initial efficiency in

number work is directly proportional to the subject's quantitative set when the work limit method is used, which they designate in amount set, but not under the influence of a time set. The same thing is true of "the steepness of the decrement which will develop in a given amount of time in such a task." Again, "in a long task if presented to the S in parts, even though the S worked continuously with no respite between parts, he will work at a higher level of efficiency than he will when he regards the task as presented as a whole." There is a very close relationship between the particular quantitative set under which an individual is operating and the degree of increased tension which he will manifest. There is a lesser increase of tension for a long task and a greater increase in tension for a shorter task in anticipation of the nearness of the end of the work. The shift in the level of early tension the writers believe to be closely parallel, even identical, with the thing called initial spurt.—*S. Renshaw* (Ohio State).

90. **Campos, N., & Radecki, W. Pesquisas experimentaes da influencia do material mnemonico esquecido sobre a associação voluntaria.** (Experimental examinations into the influence of forgotten memories on voluntary association.) *Ann. da Colon. de Psychopath.*, 1928, **1**, 219–243.—The authors are concerned with the problem of the influence of material recently fixed and forgotten on voluntary associative processes. In soliciting the memory fixation a series of 100 words was presented to the subjects. The words were chosen from twenty categories, i.e., five words in the list were military words, five were household words, etc. On the completion of the reading the subject was tested for retention. The words not recalled were classified as forgotten. After ten minutes the subjects were asked to write during a period of one minute as many words in each category as they possibly can during the time interval. The responses were then examined and the reappearance of forgotten material noted. In order to deal with the factor of chance the results were compared with the analogous experiences of voluntary association not preceded by the memory test. The authors found that memory material recently fixed and forgotten influences the processes of voluntary association, being employed in the resolution of the problems imposed in the association. The influence of the forgotten material is augmented in proportion to the difficulty of the problem to be solved.—*J. W. Nagge* (Chicago).

91. **Crafts, L. W. Whole and part methods with non-serial reactions.** *Amer. J. Psychol.*, 1929, **41**, 543–563.—The problem of this experiment was the investigation of the relative value of whole and part methods of learning a non-serial reaction, i.e., card-sorting. Previous investigations have demonstrated the superiority of the whole method, but the explanation of this that has been given has been that the part method failed to give practice in forming the connections between the parts; otherwise, the part method has been held to have certain inherent advantages. Since card-sorting demands no fixed sequence of reactions it was felt that here the superiority of the part method should be demonstrated. 143 undergraduate men and women served as subjects. They were required to sort 72 flinch cards into 9 compartments. The methods of learning were: (1) whole, (2) pure part, (3) combination part, and (4) progressive part. The same amount of practice was given by each method before the results of the learning were computed. There were 10 trials in all; the 7th was the test trial, this being the trial on which the whole pack, regardless of method of training, was first sorted. Time and errors on each trial were taken. A more complex series was learned by each of the above methods; here the problem was to sort the cards, not into boxes having the same number, but into the box containing the just preceding number, i.e., 2 was put into box 1, 3 into box 2, etc. For the simple card-sorting the results on the 7th trial were as follows:

Whole Method	Pure Part	Combination Part	Progressive Part
63.3 sec.	83.0 sec.	74.2 sec.	76.7 sec.

Computing the amount of time to attain a certain speed the results were:

Standard	Whole Method		Pure Part		Combination		Progressive	
	Trial	Total sec.	Trial	No. of sec.	Trial	No. of sec.	Trial	No. of sec.
75 sec.	3d	182.5	8th	350.6	7th	356.0	7th	364.3
65 sec.	6th	397.4	9th	418.2	9th	497.8	10th	581.8
60 sec.	8th	524.6	10th	481.1	10th	563.3	Not attained	

It should be pointed out that after the 7th trial no one of the part methods could any longer be considered a part method alone, for the last trials (7 to 10) were all performed by the whole method. Results from the complex card-sorting technique were similar, with even more marked and consistent differences; regardless of whether the criterion was the amount of time required on the 7th trial, or the amount of time and number of trials to reach a certain standard, the whole method was first, pure part inferior, with the other part methods in an intermediate position and no reliable difference between them. This experiment with non-serial material would indicate that the inferiority of the part method does not lie merely in the difficulty it introduces in the matter of making connections.—*D. E. Johannsen* (Wellesley).

92. **D'Agostino, V. Osservazioni e precetti degli scrittori antichi intorno all'attenzione.** (Observations and rules of ancient writers concerning attention.) *Arch. ital. di psicol.*, 1929, **7**, 101–121.—The psychology of attention as it presents itself in the writings of Greek and Roman authors. Of special interest is the summary of terms which have been employed by ancient writers in referring to various phenomena in the field of attention.—*H. Klüver* (Behavior Research Fund).

93. **De Marchi, S. Le valutazioni numerichi di colletività.** (Numerical estimates of groups.) *Arch. ital. di psicol.*, 1929, **7**, 177–255.—The author has sought to determine experimentally the main factors on which depend the immediate numerical estimates (i.e., those independent of reasoning proc-

esses) of complexes (groups) of points shown for a very brief time. It is found that the subjects can be divided into two types, the over-estimating and the under-estimating. In analyzing the absolute quantitative impressions, attention was given mainly to the influence on the result of the estimates exerted by: varying the duration of exposure of the groups, the magnitude of the area within which they appear, etc. Special examination was made of the situations in which the groups, although appearing motionless on a surface, are seen in motion across a slit.—*R. E. Schwarz* (New York University).

94. **Droba, D. D. Effect of printed information on memory for pictures.** *Museum News*, 1929, **7**, No. 5.—Twenty pictures accompanied by six different amounts of information were presented to a group of 120 college students. The information ranged from no information to an amount exceeding the longest that is usually used in art galleries. Each picture was exposed for 15 seconds. Then the experimenter left the room while the subject recalled in writing what he had seen. In a second experiment, the exposure was extended to thirty seconds. In calculating averages of recall for each picture, due allowance was made for the factors of art education of subject, number of visits to art museum, and the number of times the subject had seen the picture. It was found that information influences recall of a picture. With no information, fewer pictures are recalled than with just the title. The effect of the amount of information depends upon the length of exposure. Its effect was minimized in the 30 second exposure as compared with the results of the 15 second exposure time. The interesting character of the information given will have an effect upon the recall of the picture. The name of the picture, the last name of the painter, and a short sentence about him, constitutes the type of information most favorable to recall of the picture. This experiment was performed in the psychological laboratory of the University of Chicago.—*D. M. Olson* (Clark).

95. **Eidens, H. Experimentelle Untersuchungen über den Denkverlauf bei unmittelbaren Folgerungen.** (Experimental investigations on the reasoning processes involved in immediate inference.) *Arch. f. d. ges. Psychol.*, 1929, **71**, 1–66.—22 syllogistic propositions were presented to twelve subjects, who were directed to report on the preceedures employed in reaching a solution along with other subjective phenomena. Spatial representations in the form of circular masses were generally used, regardless of the type of judgment involved. Errors were largely due to the selection of false illustrations. Contradictory or negative relations were feebly symbolized, and incidentally, produced the greatest errors. A weakness in the traditional logic of the contradictory proposition is exposed. If it is understood that the statement that "Some S is P" is false, one cannot conclude that therefore "No S is P." One can only say that these particular cases of S are not P; it is possible that other cases might be. The protocols of the text are quite extensive.—*G. W. Hartmann* (Pennsylvania State).

96. **Ferrière, A. La loi du progrès.** (The law of progress.) *Psychol. et vie*, 1929, **3**, 135–137.—*Math. H. Piéron* (Sorbonne).

97. **Freiberg, A. D., Dallenbach, K. M., & Thorndike, E. L. The influence of repetition of a series upon the omission of its intermediate terms.** *Amer. J. Psychol.*, 1929, **41**, 637–639.—An examination of 1068 printer's galleys of *The American Journal of Psychology* during the years 1923–1927 inclusive, gave no evidence to support "the doctrine that the frequent repetition of a series of events in the mind or body in and of itself produces a tendency toward the omission of the intermediate terms of the series." —*D. E. Johannsen* (Wellesley).

98. **Lalande, A. Les théories de l'induction et de l'expérimentation.** (Theories of induction and experimentation.) Paris: Boivin, 1929. Pp. 287.—This book analyzes intellectual functions. The author endeavors to prove that the psychological point of departure for thought lies at the median stage of generalization.—*Math. H. Piéron* (Sorbonne).

99. **Pear, T. H. Some subtler skills.** *Brit. J. Psychol.*, 1929, **20**, 145–160.—Low grade skills can be studied by behavioristic methods; subtler skills, such as mathematical skill or skill in literary composition, cannot. Besides the executive aspect of the performance there are the psychological components—the awareness of the acts as they are carried out or inhibited, the visual imagery, the auditory imagery and so on. The effects of analyzing these skills are discussed.—*H. Banister* (Cambridge, England).

100. **Radecka, H., & Radecki, W. Pesquisas experimentaes da influencia do material mnemonico esquecido sobre a associação livre.** (An experimental examination of the influence of forgotten memories on free association.) *Ann. da Colon. de Psychopath.*, 1928, **1**, 195–217.—The authors are concerned with the problem of the influence of memory material recently fixed and forgotten upon free associative processes. Subjects were presented a word list of 100 words to be read. Thirty seconds after the reading the subject was tested for retention. The material not recalled was classified as forgotten material. Ten minutes later the subject was read a stimulus list composed of words which were synonymous of the original list and presented in the same order, omitting however the synonyms of the words recalled in the first testing. The reaction words and times were noted. The experimenter later checked the extent to which the forgotten words reappeared in the capacity of free associative reactions. Very few of the forgotten words appeared in the free association reaction list and when they did occur their mean reaction time was no greater than the average of all associated words. The authors conclude that the experiments tend to show that free associative content is independent of the mnemonic

material recently fixed and forgotten.—*J. W. Nagge* (Chicago).

101. **Sen, D. N. A sphygmographic study of fatigue.** *Indian J. Psychol.*, 1929, **4**, 95–103.—Fatigue is least when mental work is done in the open air. The next best environment is the quiet of the laboratory. The worst is the crowded classroom. Under the best working conditions the average time of fatigue is 45 minutes; recovery is complete in approximately 12 minutes. The best times of day for the performance of mental work are about 8 a.m. and the time following an hour's rest after the midday meal.—*F. A. Geldard* (Virginia).

102. **Sengupta, N. N., & Bose, S. K. An experimental study of definitely and indefinitely directed attention.** *Indian J. Psychol.*, 1929, **4**, 115–118.—Different sets of psychic factors are in operation in the cases of definitely and indefinitely directed attention. The former method gives twice the efficiency of the latter in a simple learning experiment.—*F. A. Geldard* (Virginia).

103. **Weber, H. Untersuchungen über die Ablenkung der Aufmerksamkeiten.** (Investigations on distraction.) *Arch. f. d. ges. Psychol.*, 1929, **71**, 185–260.—Sixteen subjects were given the following tasks to perform: computing, cancelling, learning nonsense syllables, solving picture puzzles, thought problems, answering simple questions, defining, composing essays. The distracting stimuli were of three types: interesting anecdotes, lively music, and pictures. Control and test performances were alternated. The influence of *Einstellung* was measured by requiring the subjects to adopt various attitudes, such as the importance of the work, the significance of the distraction, and the compelling power of the distraction. The distracting stimulus became effective by changing the situation, by inducing another mood, or by evoking associated ideas. Varying degrees of distractibility were displayed by different subjects with a decrease in efficiency ranging from 8 to 57%; any given act of attention, therefore, is like a system of forces in which both subjective and objective factors operate. A general attentive factor appears to be present in the various tests, as the average intercorrelation is .80. Music was less of a distraction than anecdotes because of the lower level of mental activity required to apprehend it. The nature of the *Einstellung* was all-important, as was shown by the percentage decrease in efficiency of performance under different attitudes when compared with work done without *Einstellung*. The least decline in achievement occurred when the subjects were positively directed towards the task, and not negatively disregarding the distracting stimulus. The author considers his results unfavorable to Henning's constellation theory of attention, since this neglects the valuational acts of will which are shown to be influential in the different attitudes.—*G. W. Hartmann* (Pennsylvania State).

[See also abstracts 130, 187, 194, 244, 282, 355, 366, 387, 442.]

NERVOUS SYSTEM

104. **Adrian, E. D., & Bronk, D. W. The discharge of impulses in motor nerve fibres. I. Impulses in single fibres of the phrenic nerve.** *J. Physiol.*, 1928, **66**, 81–101.—Records obtained from the phrenic nerve of the rabbit indicate that during normal inspiration the impulses in each nerve fiber recur at a frequency of about 20 to 30 a second. The frequency under forced inspiration rises to from 50 to 80 a second and sometimes higher. The size of the current remains constant. At low frequencies the individual nerve fibers do not work in unison, though there is some tendency towards a grouping of the discharge. At high frequencies the discharge consists of successive "volleys" of impulses in the fibers. The electrical response of the entire nerve consists of a succession of large waves, which vary in size and regularity according to the force of the respiratory movement, due to fibers discharging synchronously. Superimposed on these large waves are small ones due to the fibers which are working out of phase.—*H. Banister* (Cambridge, England).

105. **Adrian, E. D., & Bronk, D. W. The discharge of impulses in motor nerve fibres. II. The frequency of discharge in reflex and voluntary contractions.** *J. Physiol.*, 1929, **67**, 119–151.—Records have been made of the reflex impulse discharges in individual nerve fibers supplying various muscles in the hind leg of the cat. For the spinal flexion reflex, the discharge in the nerve fibers to the peroneus longus consists of a series of impulses, varying from 5 to 25 a second with the amount of the contraction. In the fibers to the tibialis anticus the discharge is similar, but may reach 45 a second. The grading of the contraction appears to be due mainly to the change in frequency; there is little evidence for a change in the number of neurones in action. For the decerebrate extension reflexes there are often persistent discharges ranging from about 10 to 25 a second in the nerve fibers to the quadriceps when the postural tone is well marked. During a crossed extension or an extension due to stimulation of the labyrinth the rate of discharge may be as high as 90 a second. There is evidence that many fresh neurones come into play as contraction develops. Muscle action currents are similar to the discharges recorded in the single nerve fiber. Voluntary contraction of the triceps in man produces discharges of the same type as those in the cat's quadriceps. The electromyogram of the entire muscle is compounded of the rhythmic discharges in the different groups of muscle fibers. The persistent tonic contraction of the quadriceps in decerebrate rigidity is maintained by discharges at a frequency of about 5 to 25 a second from some of the neurones. During the stretch reflex the frequency and number of neurones increase. The frequency of the discharge in the crossed extension reflex increases with contraction from a lower limit of about 5 to 10 a second. It bears no relation to the frequency of the stimulation of the sensory nerve. In the spinal flexion reflex with electrical stimulation each

volley of afferent impulses produces a corresponding response in the motor neurone. The similarity in the impulses from a sense organ and from a motor nerve cell suggests some property common to axon and dendrite terminations in general.—*H. Banister* (Cambridge, England).

106. **Denny-Brown, D. E., & Sherrington, C. S. Subliminal fringe in spinal flexion.** *J. Physiol.*, 1928, **66**, 175–180.—Under concurrent strong stimulation of two afferents, α and β, the number of discharging motor units is less than the sum of the two reflexes singly. With weak stimuli the effect of the two together is often greater than that of the two separately. In experiments on the spinal flexion reflex (hind leg of cat) this interaction points to the existence centrally of a fringe of subliminal excitatory effect with strong and maximal as well as with weak stimulations of individual afferent fibers. When this fringe has been once lifted above the threshold, it may be maintained by a stimulus which was previously subliminal.—*H. Banister* (Cambridge, England).

107. **Fenn, W. O. The metabolism of nerves.** *Medicine*, 1928, **7**, 433–466.—The oxygen consumption of nerve gradually increases to a maximum which is followed at the end of stimulation by a gradual decrease. The delay seems greater than can be accounted for by diffusion alone. This persistent oxidative recovery results in the lengthening of the refractory period, so that, to this extent, nerve is fatigable. A difficulty in the determination of the respiration quotient is the absorbtion of carbon dioxide by the nerve. To determine this, Fenn is measuring the carbon dioxide dissociation of nerve. The R.Q. of nerve is found by Fenn to be 1.19 at a constant carbon dioxide tension. This excess R.Q. is probably a result of the carbon dioxide diffusion in the nerve and Fenn expresses a doubt as to the possibility of measuring the true R.Q. uncomplicated by this difficulty. The diffusion of carbon dioxide and oxygen in the nerve is discussed. There is some indication that a nerve may store some oxygen and evidence is given to show that conduction itself is oxidative. Fenn relates his measurements to those made by others.—*O. W. Richards* (Clark).

108. **Haas, L. A sellanagyság klinikai értékeléséröl.** (The clinical value of the size of the sella turcica.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 363–372.—The author discusses the objections brought by many against the measurement and the clinical importance of the size of the sella turcica. He then analyzes very thoroughly the technique of getting an objective measurement of the size and any abnormalities of the organ by means of Röntgen rays, and describes the advantages of doing so.—*D. E. Johannsen* (Wellesley).

109. **Hines, M. On cerebral localization.** *Physiol. Revs.*, 1929, **9**, 462–574.—A review of literature with an appended list of the writings of 183 authors on the subject.—*M. F. Fritz* (Iowa State College).

110. **Marcu, I. Spinal excitability in emotional state.** *Quar. J. Exper. Physiol.*, 1929, **19**, 381–385.—Experiments on decerebrate cats show that peripheral or central splanchnic stimulation increases spinal excitability by favoring blood supply to the spinal cord. Afferent spinal nerve fibers also directly affect the excitability of the cord. Hind limb contribution may be determined by stimulation of the central end of the splanchnic nerve. This observation is related to the flexion of the lower limbs apparently resulting from pain in the abdomen. Emotional state favors spinal excitability by changes both in blood supply and in nerve activity.—*L. Carmichael* (Brown).

111. **Matthews, B. H. C. Specific nerve impulses.** *J. Physiol.*, 1929, **67**, 169–190.—The electrical responses from a frog's nerve, which in part served skin and in part muscle receptors, were studied. The two receptors gave different responses. There is reason to suppose that cutaneous impulses in the frog travel in the β potential wave and the proprioceptor impulses in the α wave.—*H. Banister* (Cambridge, England).

112. **Neustaedter, M. Textbook of clinical neurology.** (Intro. by E. D. Fisher.) Philadelphia: Davis, 1929. Pp. xx + 602. $6.00.—The book is written from the approach of symptomatology. The various neurological diseases and symptom complexes are grouped according to their most outstanding clinical characteristic. Thus the three principle divisions are: spastic paralyses, flaccid paralyses, and ataxias, tremors and spasms. Briefer sections cover trophic and vasomotor disorders and functional neuroses. A brief clinical description supplemented by illustrations is given of each disease with a differential diagnosis. Pathology, etiology, prognosis and treatment are likewise indicated. The first 91 pages are devoted to methods of neurological examination.—*M. A. Lee* (Chicago, Ill.).

113. **Parker, G. H. Carbon dioxide from the nerves of cold blooded vertebrates.** *Amer. J. Physiol.*, 1928, **86**, 490–503.—Parker describes the method used for calibrating his respiration chamber and compares his measurements for the carbon dioxide production of nerve with those of Fenn, Gerard and others. The carbon dioxide production is then compared with the heat liberated by nerve, and while the figures are not in actual agreement, they present a more unified picture of the chemistry of nerve conduction. The leg nerves of *R. grylio* produce 0.0022 mg. carbon dioxide per gram of nerve per minute from winter individuals and 0.0034 from summer frogs. The lateral line nerve of the dogfish averages 0.0024 mg. carbon dioxide per gram of nerve per minute. Since the gas production of the distal and proximal parts of the lateral line nerve is essentially the same Parker's evidence does not support a metabolic gradient theory of activity. The discharge of 1 cm. of fiber at rest is 1.1×10^{-8} mgs. carbon dioxide per minute and on stimulation this increases to 1.7×10^{-9} mgs. The number of molecules of carbon dioxide produced

by 1 cm. of nerve fiber is calculated and the result suggests that only a small part of the fiber is involved. This might be the surface of the fiber as has been postulated by Lillie.—*O. W. Richards* (Clark).

114. **Rössolimo, G. J. Zur genauen Methodik der Untersuchung von somatischen Funktionen des Nervensystems.** (Concerning the exact method of investigating the somatic functions of the nervous system.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 325–335.—The lack of a standard absolute value makes the results from a large number of neurological methods of investigation uncertain from a quantitative point of view. Because of the importance of certain nervous functions in determining an individual's capacity for doing some kinds of work, the psychotechnician has been forced to develop techniques for measuring these functions. The author feels that such measurements are really the problem of the specialist, even though the technician must apply the results. He therefore describes a number of instruments for the measurement of pathological changes in the functioning of the cerebellum.—*D. E. Johannsen* (Wellesley).

115. **Sandelhausen, M. Az oldalsó és középsö agyvelö-kamrak mereteinek gyakorlatilag fontosabb ingadozsai.** (Concerning the normal fluctuations of the practically significant measures of the lateral ventricles and of the third ventricle in man.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 451–470. —Lack of norms as to size and shape makes the judgment of whether the lateral and third ventricles of a brain are normal or not very difficult. The author attempts to supply this want by giving the results of measurements of an unstated number of brains. The places where such measurements were made are accurately described.—*D. E. Johannsen* (Wellesley).

116. **Tiegs, O. W. On the neurofibril structure of the nerve cell.** *Australian J. Exper. Biol. & Med. Sci.*, 1929, **6**, 111–118.—The neurofibrillae are true cell constituents and not products of fixation. Fixation alone is unable to render them visible. Moreover, they have been observed in living tissue by three other investigators. That they are intimately concerned with conduction rather than serving as skeletal structures may be inferred from the following: (1) They occur in all nerve cells whether in exposed or protected regions. (2) They are found at a very early stage of embryonic development (two-day chick); true skeletal structures develop much later. (3) They run without a break along the axon from one end to the other. (4) Boeke has observed a direct connection between sense hair and intracellular fibril in the Amphioxus. (5) They degenerate early in ruptured nerve trunks. Bielschowsky has observed extensive neurofibril degeneration in senile dementia. (6) Bozler finds that in the living cell they are plastic to mechanical manipulation and devoid of properties that one would associate with skeletal structures. The observations of Forel gave rise to the theory of neuron discontinuity but the evidence is perhaps of little value today. Evidence is presented to the effect that there is no visible gap in the neurofibril system at the neuron junction although the climbing tendril fibers of the cerebellar cortex seem to be an exception to this rule. 11 references.—*M. F. Fritz* (Iowa State College).

[See also abstracts 78, 121, 145, 151, 257.]

MOTOR PHENOMENA AND ACTION

117. **Banerjee, M. N. Technique of the psychogalvanic reflex. A preliminary note.** *Indian J. Psychol.*, 1929, **4**, 57–67.—The physical and physiological facts concerned in the psychogalvanic response are summarized. Experiments are described in which various methods of obtaining measures of the response to stimuli designed to arouse emotional excitement are compared. An appendix gives suggestions for the use of the psychogalvanic apparatus.—*F. A. Geldard* (Virginia).

118. **Bremer, F. Recherches sur le tonus et la contracture des muscles squelettiques.** (Investigations on tonus and contracture of the skeletal muscles.) *J. de neur. et de psychiat.*, 1929, **29**, 302–303.—A short report on experimental work on the differentiation of tonic and non-tonic innervation of the skeletal muscles.—*H. C. Syz* (New York City).

119. **Crisp, W. H. Eye and hand.** *Amer. J. Ophth.*, 1929, **12**, 763–764.—Observations on human development.—*C. W. Darrow* (Behavior Research Fund).

120. **Dallenbach, K. M. The rate of the hiccough reflex.** *Amer. J. Psychol.*, 1929, **41**, 687–688.—A study of the temporal sequence of the hiccough reflex over a period of some 15 hours shows that there is a gradual and large variation in the rate (average interval between successive hics during the 25th hour was 6.75″, during the 36th hour, 5.62″, and during the 40th, 7.46″) and that the rate is little subject to fatigue. The variations from the averages in all cases is large, about 25% of the average. —*D. E. Johannsen* (Wellesley).

121. **Freeman, W., & Crosby, P. T. Reflex grasping and groping: its significance in cerebral localization.** *J. Amer. Med. Asso.*, 1929, **93**, 7–12.—Reflex grasping, which is commonly observed in infants, also occurs in lesions of the frontal lobe on the opposite side. Pressure or friction on the palm causes a tonic flexure of the fingers, which at times becomes clonic. In advanced cases there may be in addition reflex groping, so that a touch on the back of the hand or on the arm or even on the face may cause the hand to follow immediately the exciting stimulus and to take hold. Phenomena similar to reflex grasping have been recognized in the lower extremities and in the jaw. For pathological grasping and groping to be manifested, it seems necessary that the corticospinal tract for the hand shall be relatively intact.—*G. J. Rich* (Boston Psychopathic Hospital).

122. **García, A. M. Un ensayo de trabajo colectivo.** (A trial at collective work.) *Rev. de ped.*, 1929, **98**, 397–403.—*J. W. Nagge* (Chicago).

123. **Holck, H. H. G. Diet and efficiency.** (Monographs on medicine.) Chicago: Univ. of Chicago Press, 1929. Pp. 72. $1.00.—The experiments reported here endeavored to secure objective evidence of the alleged effects of thorough to excessive mastication of food. The subject ate only when actively hungry, stopped when he was satisfied, chewed the food especially well, endeavored to obtain food that was craved and omitted that which was antagonistic. The experiments continued from 1922 to 1928 with a 75-week period of fletcherizing from April, 1926, to October, 1927. Body weight decreased during the fletcherizing period, and hunger increased and was more persistent. Fletcherizing decreased muscular endurance, typewriting accuracy and basal metabolism. It had no significant effect on blood pressure, pulse, oral temperature, sleeping time, mental multiplication, and typewriting speed. It induced improvement in the efficiency of solving chess problems which persisted into the final control period. Other observations of interest are given in the detailed data on methods of urinary analysis, uric acid excretion, blood pressure and muscular endurance. Methods of measuring learning of the several tasks and comparing learning during the two control periods and the period of fletcherizing are given and discussed. Bibliography of 59 titles.—*O. W. Richards* (Clark).

124. **Jellinek, A. Über "akustische" Reflexe an labyrinthlosen Tauben.** (Acoustic reflexes in labyrinthectomized doves.) *Monatsschr. f. Ohrenhk.*, 1928, **62**, 847–854.—Ewald noted after bilateral extirpation of the membranous labyrinth that doves and dogs reacted to tones as well as before. The reaction persisted even when the doves stood on cotton wool and were shorn of plumage. He concluded that the trunk of the acousticus was itself the receptor. Other workers have confirmed Ewald's findings. Wundt succeeded in deafing an animal by destruction of the remaining nerve stump by arsenic. Kalischer obtained discrimination of specific tones in dogs after extirpation of the cochlea, or after destruction of the temporal lobe of the brain, although in this condition these animals were deaf to all other sounds. The author tests the hearing of doves (1) in a normal condition, (2) after bilateral extirpation of the middle ear, (3) after extirpation of the labyrinths, including lagenae and vestibular apparatus. Auditory acuity was tested (1) by a learned reaction of discrimination between high and low notes, (2) by motor disturbance occasioned during hypnosis, and (3) by awakening from sleep. After removal of the middle ear, extirpation of the lagena (6 cases), or labyrintheetomy (12 cases), doves showed increased responses to auditory stimuli. These reactions persisted in one animal which was plucked and covered with vaseline. In another they continued after filling the middle ears with a mixture of cobalt and almond oil. By none of these procedures was any animal rendered deaf in the sense that he was no longer able to react to what we experience as sound.—*C. W. Darrow* (Behavior Research Fund).

125. **Jersild, A. The determinants of confidence.** *Amer. J. Psychol.*, 1929, **41**, 640–642.—The problem was to find to what degree confidence is a correlate of real skill and to what extent it may be regarded as a character trait relatively independent of actual competence. Two true-false tests covering reading and assignments were given to two groups of college students; they were required to mark the propositions ++ or −− to indicate absolute certainty, + or − to indicate fairly certain, and +? or −? to indicate a guess. The correlations obtained indicate that actual knowledge is one determinant of a confident attitude, but a show of confidence is to a large degree a matter of personal idiosynerasy and cannot be taken as a reliable measure of the actual merit of the performer. 89% of the correct answers were marked "absolutely certain," 71%, "fairly certain," and 61%, "guess." Thus a report of "absolute certainty" does not indicate perfect accuracy, but a guess has more than a 50% chance of being correct.—*D. E. Johannsen* (Wellesley).

126. **Lehmann, H. Messung des Kraftimpulses.** (Measurement of the motor impulse.) *Indus. Psychotechn.*, 1928, **5**, 264–272.—The use of the ergograph for measuring an individual's energy and endurance is defended and a formula is given for reckoning a general value for any given ergogram. An attempt is made to classify ergograms into three types: (1) energetic or powerful type; (2) non-energetic or impotent type; (3) fatigue type (very short ergogram).—*A. W. Kornhauser* (Chicago).

127. **Lehmann, H. Das statisch-dynamisch Arbeitsäquivalent.** (The static-dynamic work equivalent.) *Indus. Psychotechn.*, 1928, **5**, 313–333.—A series of experiments was conducted to determine the relat. ship between dynamic work (lifting weights) and static work or strain (holding weights). The experiments dealt both with short maximal performance and with continued work. Dynamic work is 3 to 6 times easier, the ratio varying with the strength of the worker. Correlations of .5 to .7 are found between individuals' standing in the weight performance and in dynamometer scores; .55 between performances and increase in pulse. Practical applications are briefly considered. Bibliography of about 25 titles.—*A. W. Kornhauser* (Chicago).

128. **Marcu, I. The interaction between pressor vasomotor reflexes.** *Quar. J. Exper. Physiol.*, 1929, **19**, 387–395.—The phenomena of effacement and augmentation are studied in relation to the vasomotor reflexes.—*L. Carmichael* (Brown).

129. **M'Crea, E. D., & Macdonald, A. D. The action of drugs upon the movements of the stomach.** *Quar. J. Exper. Physiol.*, 1928, **19**, 161–170.—A study of the effect of drugs upon the stomach *in situ* complementary to previous studies from the same laboratory on the effect of the stimulation of the

stomach nerves. The effect of adrenaline, ergot, nicotine, pilocarpine, physostigmine, ascetyl-choline, atropine, histamine, and the stimulation of the posterior lobe of the pituitary body was studied. The results show that the parallelism between faradic stimulation of extrinsic stomach nerves and the intravenous injection of sympatho- and parasympatho-mimetic drugs is less perfect than the results of previous studies had indicated. In general it seems that there is an optimum position of postural activity in the stomach. This optimum point is amenable and dependent on certain changing factors such as the amount of food in the stomach. Nerves or drugs may therefore either augment or inhibit the action of the stomach depending upon the condition of the muscles of that viscus at that time.—*L. Carmichael* (Brown).

130. **Pollock, K. G. A. A further study of the psychological effects of long spells of repetitive work.** *Brit. J. Psychol.*, 1929, **20**, 43–58.—This investigation into the relation between accuracy and speed of work and duration of work was carried out with a game called *Guidit*, the subject being required to guide a metal ball to the top of an inclined plane passing en route various holes and "bunkers." Three subjects took part in the experiment, but only one worked up to long spells of 8 hours a day. Her results only are described. For periods of one hour and upwards accuracy tended to fall off in the latter half of the period when speed increased. While prescribed pauses increased accuracy, pauses enforced by external causes produced a decrease. Feelings of tiredness corresponded with decrease in accuracy, but appeared to have no effect on rate of work. The effects of various conscious attitudes were also studied.—*H. Banister* (Cambridge, England).

131. **Portmann, G., & Mailho, J. L. La valeur clinique de l'épreuve de Kobrak.** (The clinical value of Kobrak's test.) *J. de neur. et de psychiat.*, 1929, **29**, 277–281.—For the examination of the vestibular apparatus, the author suggests the use of the simplified method of Kobrak (Baldenweck), which consists of the injection into the external auditory canal of 10c.c. of water at a temperature of 27° C. (in two seconds). The period of latency between the injection and the appearance of the nystagmus is normally 30–50 seconds; the duration of the nystagmus does not exceed 10 seconds. It is recommended to give in addition to this test Bárány's calorimetric test with Brüning's apparatus, and the rotation test according to Bárány. With these different tests apparently discordant or paradoxical results may occur. From this and from experimental evidence it is concluded that the calorie reflex may be produced (1) by direct excitation of the vestibular organs and (2) by action upon an intermediary sympathetic-vasomotor factor. Kobrak's test releases this vasomotor reflex.—*H. C. Syz* (New York City).

132. **Reid, C. The mechanism of voluntary muscular fatigue.** *Quar. J. Exper. Physiol.*, 1928, **19**, 18–42.—Isotonic contractions of the middle finger were studied in this investigation by means of Mosso's ergograph. Different weights (½ to 5 kilos.) and different rates of contraction (12 to 160 per min.) were used. In parts of the experiment requiring artificial stimulation faradic currents at various rates were employed. The results show that efficient local excitation of nerve-trunk or muscle elicits contractions quite as strong as the most vigorous voluntary effort. These results contradict those of Mosso and Fick. There is evidence that the ability to have impulses conducted from nerve to muscle passes before the muscle itself loses contractility in the ischemic arm. The evidence seems to show that voluntary fatigue is primarily central, but muscle fatigue may contribute to this phenomenon. Muscle fatigue is more noticeable in a rapid than in a slow series. Local conditions in muscle may have an inhibiting influence, through afferent nervous impulses, on so-called voluntary fatigue. A muscle that is loaded does not recover as rapidly as an unloaded one. Ischemia does not affect voluntary response for about fifteen minutes. The fatigue from static voluntary contractions seems to be essentially central in origin. The evidence seems to show that afferent impulses from muscles tend to limit the muscular responses in voluntary effort, but changes in the muscles themselves and changes in the central nervous system also influence so-called voluntary fatigue.—*L. Carmichael* (Brown).

133. **Reid, C. Studies in the behavior of limb muscles and nerves during experimental ischaemia.** *Quar. J. Exper. Physiol.*, 1928, **19**, 127–143.—Experimental change in the local blood supply produces changes in the function of the nerves and muscles concerned. Skeletal muscles shorten slightly in the early part of the ischemic period, but lengthen in the latter part. Re-admission of blood again shortens muscle. Voluntary contraction was measured by infrequent contractile efforts. Such contractions are hardly affected by ischemia of fifteen minutes' duration, but after this time a rapid decline sets in, and in thirty minutes voluntary movement is almost completely abolished. Contractile response can still be secured from direct nerve or muscle stimulation, even after this period. Observations are given on the typical course of recovery. Animal experiments indicate that the selective effect of ischemia is on the nerve-muscle junction. The total amount of work prior to fatigue is reduced even in the first few minutes of voluntary effort when the blood supply to the muscle is interrupted, even though there is little effect on a single voluntary contraction.—*L. Carmichael* (Brown).

134. **Souriau, Et. L'art du repos.** (The art of repose.) *Psychol. et vie*, 1929, 3, 180–183.—*Math. H. Piéron* (Sorbonne).

[See also abstract 372.]

PLANT AND ANIMAL BEHAVIOR

135. **Courthial, A. S. The persistence of infantile behavior in a cat.** *J. Genet. Psychol.*, 1929, **36**,

349–350.—A case of persistent suckling in a cat of 18 months.—*J. F. Dashiell* (North Carolina).

136. **Crozier, W. J., & Pincus, G. On the geotropic orientation of young mammals.** *J. Gen. Physiol.*, 1928, **11**, 789–802.—Three series of observations on successive generations of an inbred strain of *Rattus norvegicus* indicate that the constants in equations of curves describing the geotropic orientation are characteristic of the strain. Different inbred strains have been obtained for which the respective constants are quite dissimilar.—*D. G. Marquis* (Stanford).

137. **Crozier, W. J., & Stier, T. J. B. Geotropic orientation in arthropods. I.** *Malacosoma* **larvae.** *J. Gen. Physiol.*, 1928, **11**, 803–821.—The geotropic orientation of larvae of the caterpillar *Malacosoma americana* was found to parallel that of other animals studied by similar methods. Evidence is presented that the physiological mechanism regulating the amount of orientation involves the unequal pull on the musculature of the two sides of the animal.—*D. G. Marquis* (Stanford).

138. **Dennis, W. Responses of chicks when monocularly blind.** *J. Genet. Psychol.*, 1929, **36**, 480–482.—Pecking responses were found to be as efficient as in normal chicks.—*J. F. Dashiell* (North Carolina).

139. **Dolley, W. L., Jr. Dark adaptation in the eye of** *Eristalis tenax*. *Physiol. Zool.*, 1929, **2**, 483–490.—When only one eye of the drone fly has been dark-adapted the animal deviates to that side instead of taking a diagonal path with respect to two horizontal beams of light opposed at right angles. This deviation is used to measure the extent of dark adaptation. During exposure to darkness the sensitivity of the eye to light increases in about 60 minutes to a maximum of about 21 times its sensitivity when adapted to a luminous intensity of 52.9 m.c. It remains at about this level for about 2 hours, then decreases rapidly to a point which is probably lower than that which obtains in light-adapted eyes.—*O. W. Richards* (Clark).

140. **Dolley, W. L., & Wierda, J. L. Relative sensitivity to light of different parts of the compound eye in** *Eristalis tenax*. *J. Exper. Zool.*, 1929, **53**, 129–139.—The ommatidia located at about the center of the eye of the insects studied are about 55 times more sensitive than those near the anterior end of the eye.—*L. Carmichael* (Brown).

141. **Fries, E. F. B. Drug action in galvanotropic responses.** *J. Gen. Physiol.*, 1928, **11**, 507–513.—Strychnine induces a reversal of the normal galvanotropic response of planarians and earthworms. This is interpreted as the action of the drug on central synapses or on homologous elements.—*D. G. Marquis* (Stanford).

142. **Grindley, G. C. Experiments on the influence of the amount of reward on learning in young chickens.** *Brit. J. Psychol.*, 1929, **20**, 173–180.—In a simple form of maze experiment with young chickens, it was found that a sixfold increase in the amount of food given as a reward produced an increase of about 25% in the rate of learning. In another series of experiments it was found that a transient kind of learning occurs when, instead of being allowed to eat, a chicken is merely allowed to see food as a reward for successful performance.—*M. D. Smith* (Cambridge, England).

143. **Hecht, S. The influence of temperature on the photosensory latent period.** *J. Gen. Physiol.*, 1928, **11**, 649–655.—The response of *Pholas dactylus* to exposure to light has a long latent period during which the animal may remain in complete darkness. It was determined that the effect of temperature on the latent period is adequately described by the Arrhenius equation when $\mu = 18{,}300$. This value differs from that which has been found for two other photosensitive animals, *Mya* and *Ciona*. "This is taken to mean that though the organization of the receptor process is the same for the three species, the chemical materials concerned are very likely different."—*D. G. Marquis* (Stanford).

144. **Hecht, S. The relation of time, intensity and wavelength in the photosensory system of** *Pholas*. *J. Gen. Physiol.*, 1928, **11**, 657–671.—The most effective point in the visible spectrum for *Pholas* is green (550 $\mu\mu$). Although this differs from the absorption spectra of *Mya*, the relation of intensity and reaction time in the two animals is identical. The conclusion is then drawn from this and previous work, that although the fundamental properties of the photoreceptor process show an identical organization in several different animals, the materials which compose these processes are specific.—*D. G. Marquis* (Stanford).

145. **Herrick, C. J. Anatomical patterns and behaviour patterns.** *Physiol. Zool.*, 1929, **2**, 439–448.—Behavior is more than the summation of reflexes because if one pattern is lost another is substituted after a time. The hagfishes, *Bdellostoma* and *Myxine*, have only two senses, smell and taste, well developed. Impulses from these receptors go to motor responses limited by the musculature which in its simplest form is a wriggle. Histological examination of the brain reveals no such simple connections. Investigation of the behavior of these animals as they develop shows that the nervous organization is present from the beginning and does not extend from reflexes added on. Rather the new arcs are extensions and expansions of the total pattern which grows as long as learning is possible. The stability of the system is due to the presence of the muscles. Stimulation leads simultaneously to direct motor activity and collateral discharge into the general field of the neurophil which either reinforces or inhibits the motor activity depending on the general condition of the body. The correlation centers emerge from the relativity equipotential neurophil at strategic points for integration, such as the thalamus, cortex, etc. This physiological integration and specialization leads to and is the unity of the individual in the higher forms. "Neither *Gestalt* nor any other psychological principle or

technique, like psychoanalysis, can attain full scientific completeness until we have found out how it articulates with the vital process as a whole; and this means, among other things, that we must find a physical organization adequate for the task. We already know where to look for this, but full knowledge of just how it works is likely to be long delayed."—*O. W. Richards* (Clark).

146. **Herter, K. Reizphysiologie and Wirtsfindung des Fischegels Hemiclepsis marginata.** (The physiology of stimulation and the finding of a host in the fish-leech, *Hemiclepsis marginata.*) *Zsch. f. vergl. Physiol.*, 1928, **8**, 391–444.—Over 150 of the leeches were employed in experiments investigating their responses to different kinds of stimuli, e.g., contact, movement, water-currents, gravity, temperature, chemicals, light and electricity, with a view to disclosing the nature of the influences that enabled the leech to find and attach himself to the host. The author concludes that optical, chemical and mechanical stimuli, issuing from the fish host, furnish the cues for the leech in finding a host. The leeches manifest a negative phototaxis, and a "shadow-reflex," which are of assistance here. They are stimulated chemically by mucous secretions from the fish, and they react to pulsations of current in the water by a positive rheotaxis, through which they are led to the moving host. Bibliography.—*W. D. Commins* (Stanford).

147. **Hoagland, H. On the mechanism of tonic immobility in vertebrates.** *J. Gen. Physiol.*, 1928, **11**, 715–741.—Tonic immobility (feigning death) may be readily produced in the lizard *Anolis carolinensis* by turning it into the dorsal position and applying light pressure to the thorax. Recovery is attended by marked activity, but if the conditions are maintained the animal immediately becomes reimmobilized. It was found that the durations of the immobile periods varied rhythmically in most cases. When the reciprocal of the time of the rhythm was plotted as a function of temperature according to the Arrhenius equation, the distribution fell in two linear groups. This result was interpreted by assuming the release, through reflex stimulation, of hormonal substances, effective at two overlapping temperature ranges. "These substances are assumed to act as selective inhibitors of impulses from so-called 'higher centers,' allowing impulses from tonic centers to pass to the muscles."—*D. G. Marquis* (Stanford).

148. **Howe, H. E. The Florida anthropoid laboratory of Yale University.** *Science*, 1929, **70**, 444–445.—*G. J. Rich* (Boston Psychopathic Hospital).

149. **Keeler, C. E. The geotropic reaction of rodless mice in light and in darkness.** *J. Gen. Physiol.*, 1928, **11**, 361–367.—Normal mice fail to show geotropic orientation on an inclined surface if light stimulation is introduced. The rodless mice used in this experiment oriented as well under light as in the dark. There is, therefore, no indication by this test that the rodless mouse has sight.—*D. G. Marquis* (Stanford).

150. **Koller, G. Versuche über die inkretorischen Vorgänge beim Garneelenfarbwechsel.** (Investigations of the inner secretory processes during color changes in shrimps.) *Zsch. f. vergl. Physiol.*, 1928, **8**, 601–612.—The author's problem was to identify the organ that brought about the color changes in the shrimp corresponding to the light or dark background upon which it was placed. By taking organs from an animal in which the color changes had been previously induced, and by feeding them individually to a "white animal," the author found that it was "an inner secretory organ lying in the anterior, median and dorsal region of the cephalothorax which conditions the expansion of the black and red pigments." This was confirmed by the operative removal of this organ, as a result of which no sympathetic color changes took place. Extracts of different parts of the body were also made and were injected into a "white animal" with a similar result, that of identifying the same organ as being responsible for the increased pigmentation. It was demonstrated, furthermore, that the secreted substance was carried in the blood stream. This indicates that the substance producing the changes in color possesses the nature of a hormone. A further point of comparison with the hormones of vertebrates shows that its effects are not limited to members of a single variety or species. Bibliography.—*W. D. Commins* (Stanford).

151. **Lashley, K. S. Brain mechanisms and intelligence.** Chicago: Univ. of Chicago Press, 1929. Pp. xiv + 186. $3.00.—General theories of neural function are summarized, and extensive experiments by the author on brightness discrimination and maze habits in normal and operated rats are surveyed. The author draws the following inferences: "(1) The learning process and the retention of habits are not dependent upon any finely localized structural changes within the cerebral cortex. The results are incompatible with theories of learning by changes in synaptic structure, or with any theories which assume that particular neural integrations are dependent upon definite anatomical paths specialized for them. Integration cannot be expressed in terms of connections between specific neurones. (2) The contribution of the different parts of a specialized area or of the whole cortex, in the case of non-localized functions, is qualitatively the same. There is not a summation of diverse functions, but a non-specialized dynamic function of the tissue as a whole. (3) Analysis of the maze habit indicates that its formation involves processes which are characteristic of intelligent behavior. Hence the results for the rat are generalized for cerebral function in intelligence. Data on dementia in man are suggestive of conditions similar to those found after cerebral injury in the rat. (4) The mechanisms of integration are to be sought in the dynamic relations among the parts of the nervous system rather than in details of structural differentiation. Suggestions toward a theory of the nature of these forces are presented."—*W. S. Hunter* (Clark).

152. **Maurer, S., & Tsai, L. S. Vitamin B deficiency in nursing young rats and learning ability.** *Science*, 1929, 70, 456–458.—Normal rats are far superior in their learning ability to rats which have been depleted of vitamin B during their nursing period.—*G. J. Rich* (Boston Psychopathic Hospital).

153. **Menzel, R., & Menzel, Rudolfine. Beobachtungen über das Abstraktionsvermögen des Hundes.** (Observations on the power of abstract thinking in the dog.) *Arch. f. d. ges. Psychol.*, 1929, 71, 339–350.—These authors hold that the present-day controversy as to intelligence in animals is quite idle. No conclusions can be reached as to the mental life of animals except through interpretations in the light of human intelligence, an anthropomorphic projection. Intelligence of animals is being studied only through isolated performances and these have no significance except as seen in relation to the totality of the mental life. Power of abstract thinking is regarded as the highest accomplishment of the human mind. Abstract thinking has for its basis knowledge and interests. To a degree this thought is possible with dogs as their attachment for man awakens an interest in his doings.—*A. B. Herrig* (Central State Teachers College).

154. **Munn, N. L. Concerning visual form discrimination in the white rat.** *J. Genet. Psychol.*, 1929, 36, 291–302.—Field's experiment on the ability of the rat to discriminate visual forms (see III: 177) is criticized in respect to certain points of technique, especially the lack of control of a brightness-difference and area-difference found in the figures as observed from the crucial point on the floor for the rat. In a repetition of one part of his work, the rats that had learned the problem broke down after the forms confronting them had been made equal in area and brightness.—*J. F. Dashiell* (North Carolina).

155. **Nissen, H. W. The effects of gonadectomy, vasotomy, and injections of placental and orchic extracts on the sex behavior of the white rat.** *Genet. Psychol. Monog.*, 1929, 5, 455–550.—The monograph includes a documented summary of the physiology of the sex glands and the conclusions of the experiments with 183 male and 110 female albino rats. The Columbia obstruction method was used for measurement of the responses of the rats. Controls were devised for the normal physiological variation of the males and females. The operative procedure is given in detail and the observations are summarized in 13 tables and 5 figures. The sex drive of the albino rat includes two fairly distinct patterns, each having its own end. In the males there is little correlation between the contrectation drive resulting in sex play and the detumescence drive terminating in copulation. The correlation is high in the females. Spaying the female rats at 5 months of age results in complete absence of the detumescence drive and a weak contrectation drive. Two injections of placental extract (cow) give an almost normal contrectation drive to these animals. A slow diminution of the contrectation drive occurs in males castrated at the same age. The injection of placental extracts increases the contrectation drive in both normal and castrated rats. The lipoid extract of testis-epididymis was without effect, though the watery extract slightly increased the contrectation drive. Vasotomy of rats 14 months old had no appreciable effect when they were tested 60 days later. The individual differences noted are described. As a result of these experiments the author assumes that the gonadal hormone does not directly stimulate or facilitate sex behavior, but controls the development of an interpolated structure, which is sex specific in function, and which may be activated by both ovarian and testicular hormones. In the male rat the penis and prostate gland may be concerned. Bibliography of 151 titles.—*O. W. Richards* (Clark).

156. **Schlieper, C. Über die Helligkeitsverteilung im Spektrum bei verschiedenen Insekten.** (Upon the distribution of brightness in the spectrum for various insects.) *Zsch. f. vergl. Physiol.*, 1928, 8, 281–288.—This is partly a summary of results obtained by other investigators in the field of insect vision and partly an account of the author's own experiments with different kinds of butterflies. The plan of experimentation was to place the insect before a revolving cylinder containing alternating lines of the colors used (red, yellow, green and blue), and grays of different degrees of brightness. Compensatory movements of the eyes, head, etc., occurred when the grays and the individual colors were not seen by the insects as having the same degrees of brightness. It was concluded that the reaction of different insects to the brightness of colors is not uniform for all species, and that we can not draw the general conclusion that all insects respond in the same manner as a totally color-blind human. It depends upon the species of insect just where the maximum brightness will lie. In general, however, it may be said that with decreasing complexity in bodily organization, the greater is the tendency for the maximum degree of brightness to lie near the short-wave end of the spectrum.—*W. D. Commins* (Stanford).

157. **Stier, T. J. B., & Pincus, G. Temperature characteristics for frequency of respiratory movements in young mammals.** *J. Gen. Physiol.*, 1928, 11, 349–356.—Two-day-old mice have little capacity for regulation of body temperature. It is thus possible to study the temperature characteristics of the rhythmic activities of respiration. The thermal increments and critical temperatures obtained point to a similarity in the controlling system of reactions for both homothermic and poikilothermic organisms. —*D. G. Marquis* (Stanford).

158. **Stone, C. P. The age factor in animal learning: II. Rats on a multiple light discrimination box and a difficult maze.** *Genet. Psychol. Monog.*, 1929, 6, 125–202.—Experiments bearing mainly on the question of age differences in learning ability in white rats are here reported. A total of 311 rats were tested on the multiple-unit light discrimination box

described in an earlier article (see III: 2141), groups at different ages being compared under different conditions of motivation and of preliminary and accompanying training. (Six groups were given preliminary training on the multiple-T maze, six other groups had not only this training, but simultaneous with the light discrimination training were trained on the three-platform escape box, and three strongly motivated groups were run with only the usual preliminary 5 days' training on the simple platform escape box.) The only age difference revealed was in the relearning of the light discrimination with the dark side now indicating the open route, rather than the light side as in the forty prior trials. Groups starting on this relearning at 51, 246, and 771 days (21, 19, and 7 rats) showed the 51-day group first in efficiency, and the 246-day second, in forming the new habit. With the maze, preliminary experiments indicated somewhat greater learning ability in a group starting at 51 days over other groups starting at 160, 221, and 566 days, although in 40 trials no animal had two successive errorless runs, in spite of the strong motivation used. The oldest group was run for 80 trials, but no animal made two successive errorless runs, and errors became stereotyped in the latter training. Less than half of the rats eliminated as many as 50 to 60% of the number of errors with which they started. After about the first ten trials, errors are most frequently made because of alternations at the junctions where this is incorrect (the right and left choices required run RLRRLLR-LRRLLRLR—or the reverse of this, in the reverse maze pattern).—*R. Leeper* (Clark).

159. **Sumner, F. B., & Keys, A. B. The effects of differences in the apparent source of illumination upon the shade assumed by a flatfish on a given background.** *Physiol. Zool.*, 1929, **2**, 495–504.—The shade of the flounder, *Hypopsetta guttulata*, depends on the ratio of the light reflected by the substrate to the inverse of the light coming from above the animal.—*O. W. Richards* (Clark).

160. **Vicari, E. M. Mode of inheritance of reaction time and degrees of learning in mice.** *J. Exper. Zool.*, 1929, **54**, 31–88.—The inheritance of reaction time and degrees of learning as measured by a simple maze were studied in four closely inbred stocks of mice involving 891 individuals. Reaction time is used in the sense of time required to complete a run in the maze. Three types of reaction time curves were observed: (1) flat; (2) gradually descending; (3) descending-ascending. A study of three different crosses through the F_1 and F_2 generations reveals the likelihood of some form of dominance of the short reaction time. The degree of learning expressed in terms of perfect runs parallels the results of reaction time. Subsequent generations show no indications of having been aided in learning a simple maze problem by the training of three generations of ancestors which is in agreement with the findings of other investigators. Bibliography of 16 titles.—*M. F. Fritz* (Iowa State College).

161. **Warden, C. J., & Cummings, S. B., Jr. Primacy and recency factors in animal motor learning.** *J. Genet. Psychol.*, 1929, **36**, 240–256.—Previous researches on this problem have failed so to control all other variables as to isolate the one factor of order of culs-de-sac. In an earlier study with a maze in which the culs-de-sac were not strictly uniform, neither a primacy-recency nor a regressive order of their elimination was observed. In a later study with the Warner-Warden linear maze, a regressive order was observed in the learning of the very short mazes; but in longer mazes no consistent tendency as to order of elimination correlating with serial position was evidenced at all, but only a hit-or-miss order. The conventional notion of a regressive order of elimination of culs-de-sac has no supporting evidence. Apparently, retracings influence the order of elimination considerably, tending to mask any primacy effect; but the usual mechanical devices are considered unsatisfactory, and the problem of controlling the retracing tendency is clearly raised.—*J. F. Dashiell* (North Carolina).

162. **Warden, C. J., & Hamilton, E. L. The effects of variations in length of maze pattern upon rate of fixation in the white rat.** *J. Genet. Psychol.*, 1929, **36**, 229–239.—Rats were trained in mazes of 2, 4, 6, 8, and 10 culs-de-sac respectively, but preserving a uniformity of pattern in other respects, being of the Warner-Warden linear unit design. Analysis of error scores shows that the longer mazes are relatively easier to learn, i.e., that the difficulty of learning per maze unit varies inversely as the number of culs-de-sac included in the maze. This relationship is quite the opposite of that obtaining in the memorization of serial language material. It is pointed out that this finding does not strengthen the algedonic view of learning.—*J. F. Dashiell* (North Carolina).

163. **Yoshioka, J. G. An alternation habit in rats in a simple maze.** *J. Genet. Psychol.*, 1929, **36**, 257–266.—30 rats were forced to run through right and left triangular paths in alternation for a total of 6 runs on each of three successive days. They were then allowed 6 uncontrolled runs on each of ten successive days, to see whether any continuance of alternation would be observed. Only a very slight tendency was shown, 11 out of 300 daily performances being perfect alternation; but the writer points out that this is slightly higher than would be the chance expectation.—*J. F. Dashiell* (North Carolina).

164. **Yoshioka, J. G. Is vision useless for the rat in a familiar maze?** *J. Genet. Psychol.*, 1929, **36**, 342–343.—Rats were observed to hesitate at a spot in a familiar maze where a new visible detail was present.—*J. F. Dashiell* (North Carolina).

165. **Yoshioka, J. G. Has the rat a sense of momentum?** *J. Genet. Psychol.*, 1929, **36**, 343–344.—A rat was observed to start runs at greater and greater distances from a small aperture in its suc-

cessive efforts to drive its head through.—*J. F. Dashiell* (North Carolina).

[See also abstracts 26, 124.]

EVOLUTION AND HEREDITY

166. **[Anon.] Bibliographia Eugenica.** *Eug. News*, 1929, **14**, 227–242.—196 titles published in 1928–29, including books and articles in English and other languages, with a sentence or two of description for each one. There are 11 titles on psychometry, 19 on mental and nervous diseases and defects, 7 on mental traits, and 14 on sense organs.—*R. K. White* (Stanford).

167. **Harnly, M. H. An experimental study of environmental factors in selection and population.** *J. Exper. Zool.*, 1929, **53**, 141–169.—A study of the effects of various environmental factors on the development of *Drosophila melanogaster*.—*L. Carmichael* (Brown).

168. **Lotka, A. J. Biometric functions in a population growing in accordance with a prescribed law.** *Proc. Nat. Acad. Sci.*, 1929, **15**, 793–798.—The number of births per unit of time at time t (B_t), is expressed as a function of $p(a)$ (the probability, at birth, of surviving to age a), and N_t (the total population at time t). Four cases are considered: (1) when the population is stationary; (2) when the population grows according to the law of Malthus; (3) when the population grows according to any arbitrary function that can be expressed as a series; and (4) when the population grows according to the Verhulst-Pearl law. From a knowledge of B_t, the age distribution of the population at time t follows at once. In the case of a population obeying the Verhulst-Pearl law, formulas are presented for the computation of b_t, "the birth rate *per head* per unit of time"; and for a measure of female fertility. The treatment throughout explicitly assumes that the survival function $p(a)$ is constant.—*H. S. Conrad* (California).

169. **MacAuliffe, L. L'hérédité, la personnalité et la famille.** (Heredity, personality, and the family.) *Bull. Soc. d'étude des formes humaines*, 1929, **7**, 1–30.—A study of the Carnot family.—*Math. H. Piéron* (Sorbonne).

170. **Máday, I. Az alkalmazkodási szélesség szerepe a lelki tulajdonságok kialakulásában.** (The spread of adaptation in the development of mental characteristics.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 293–301.—The author complains of the almost universal acceptance of the concept of the innateness of mental characteristics. He presents some arguments from the empirical point of view for the converse of the proposition. The most important of these arguments is the possibility of establishing conditioned responses in animals which are quite contrary to their instinctive reactions in those situations, and that it is then possible for these reactions to be inherited. He feels that without the possibility of inheriting what our ancestors have learned, civilization would never have reached the higher levels.—*D. E. Johannsen* (Wellesley).

171. **Shattuck, R. H. Mongolism in one twin.** *Eug. News*, 1929, **14**, 134–135.—"Mongolism in one twin is comparatively rare, there being only thirty-three cases reported to date." The etiology of mongolism is still very obscure. Brousseau and Brainerd conclude that it is not characterized by unhealthy or neuropathic heredity, and that it is not primarily caused by disease of the maternal reproductive organs, since, if so, the occurrence in only one of twins would be hard to account for. It may be due to some glandular disturbance, or to smallness of the amniotic sac.—*R. K. White* (Stanford).

172. **Whitney, E. A. Eugenic sterilization of the mentally unfit.** *Med. J. & Rec.*, 1929, **129**, 696–698.—A plea for wider legal enactments in favor of operative measures in order to prevent cacogenics from procreating, on the grounds (1) that mental deficiency is hereditary in 65–75% of cases, and (2) that only 8,000 of the 1,200,000 feeble-minded persons in the United States are given any supervised care. The author emphasizes the value of "sound logic" against prejudice and emotion, which are the chief factors in the controversy.—*R. C. Givler* (Tufts).

173. **Whitney, L. G. The basis of breeding.** New Haven: Fowler, 1929. Pp. 260.—A popularly written guide to the genetics and physiology of reproduction, particularly of sub-human forms. Material of interest to psychologists includes results on the inheritance of mental abilities in dogs and some summaries of mental inheritance in man.—*R. R. Willoughby* (Clark).

[See also abstracts 160, 178, 250, 308.]

SPECIAL MENTAL CONDITIONS

174. **Adler, A. Menschenkenntnis.** (Understanding human nature.) (3d ed.) Leipzig: Hirzel, 1929. Pp. xii + 230. M. 10.00.—*R. R. Willoughby* (Clark).

175. **Alexander, R. Hamlet the classical malingerer.** *Med. J. & Rec.*, 1929, **130**, 287–290.—Hamlet was not insane, only desperate; and his "moral malingering" was cured by the shock of being shipwrecked.—*R. C. Givler* (Tufts).

176. **[Anon.] The prescribing of narcotics.** *J. Amer. Med. Asso.*, 1929, **93**, 1384–1385.—Mental rehabilitation is the most important step in the control of the drug addict. Many, perhaps all, addicts are psychopathic and oppose any effort at rehabilitation. Physicians are responsible in some cases for initiating the narcotic habit. But there are other sources, especially the underground traffic and the right of sectarian practitioners in many states to prescribe narcotics.—*G. J. Rich* (Boston Psychopathic Hospital).

177. **[Anon.] A plea for the study of menstrual concomitants.** *Med. J. & Rec.*, 1929, **130**, 106–107.

—This article outlines a fruitful, virgin territory for future psychiatric investigation.—*R. C. Givler* (Tufts).

178. **[Anon.] Zur Frage der biologischen Wirkungen des Frauenstudiums.** (On the question of the biological aspect of female education.) *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, **16**, 352–353.—On the basis of a questionnaire answered by 39 of the 56 women students at the University of Munich, Lenz and Von Borries conclude that college women suffer from nervous and menstrual troubles both as the result of overwork and emotional stresses. They do not find anything to confirm Stieve's statement that higher education indirectly reduces feminine fertility.—*H. Marshall* (Stanford).

179. **[Anon.] Zum Kapitel "Der Hymen."** (Concerning "The Hymen.") *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, **16**, 353–355.—An old Swedish custom of deflowering each girl child immediately after birth is worthy of adoption in other communities, since it protects young women later against many complexes and repressions.—*H. Marshall* (Stanford).

180. **Basso, L. La rationalisation et le facteur social.** (Rationalization and the social factor.) *Psychol. et vie*, 1929, **3**, 164–167.—*Math. H. Piéron* (Sorbonne).

181. **Baudouin, C. L. Les méthodes de la psychanalyse éducative.** (Methods in educative psychoanalysis.) *Pour l'ere nouvelle*, 1929, **8**, 106–111.—The article deals with researches on analytical technical methods suitable for use on children. In order to offset the deficiencies in the associative method and in dream interpretations, the investigator uses play and design methods aided frequently by autosuggestion.—*Math. H. Piéron* (Sorbonne).

182. **Berry, R. J. A. The fallacies of psychoanalysis.** *Current Hist.*, 1929, **30**, 1041–1045.—The popular belief in only five senses is very slowly being replaced by the psychologist's contention that there are some twenty-odd senses. Mind depends on two important factors: first, a sufficiency of storage cells in the brain; and second, a sufficiency of incoming impulses. To those lacking in sufficient number of brain cells, and to those whose parochial limitations reduce the number of incoming sensations from all sources, psychoanalysis and Freudianism "come like manna from heaven." "What can be done by this psychoanalyst who knows little or nothing about the human brain that he who does know something of his subject cannot do?" A deficient brain cannot be changed by psychoanalysis into an organ of efficiency. Psychoanalysis is termed a false science based on untruth and depending for its popularity on that fascinating human passion, sex. Freudianism diverts attention from the essential instrument itself—the brain. Delusions, hallucinations, and other psychical occurrences are caused by over-active brain cells, and have no physical basis or foundation outside of our own bodies. At the moment, there is almost universal ignorance of the construction of the human brain, but when its truths do become widely known, these false sciences, Freudianism, and much of what today passes for psychology and mental philosophy will die out.—*D. M. Olson* (Clark).

183. **Boulenger, M. Kleptomanie et fétichisme.** (Kleptomania and fetichism.) *J. de neur. et de psychiat.*, 1929, **29**, 304–307.—The history of a mentally defective boy who showed a very persistent habit of stealing. Some of the objects stolen were of a clearly fetichistic character; they were used by the patient to produce sexual excitement, especially through the sense of smell. The patient at the age of 14.5 years had an intelligence quotient of 58. The author suggests eugenic sterilization in such cases.—*H. C. Syz* (New York City).

184. **Bramesfeld, E. Eignungsprüfung eines Rutengängers.** (Testing of a dowser.) *Indus. Psychotechn.*, 1928, **5**, 371–376.—In a series of test situations a divining-rod "expert" failed to give convincing evidence of his powers.—*A. W. Kornhauser* (Chicago).

185. **Burnham, W. H. Personality differences and mental health.** *J. Genet. Psychol.*, 1929, **36**, 361–389.—A survey is made of modern studies classifying or characterizing personalities. The value of genetic method and personality analysis for the mental hygiene of childhood is emphasized.—*J. F. Dashiell* (North Carolina).

186. **De Gaultier, J. Le subconscient et les systèmes préhenseurs.** (The subconscious and the apprehending systems.) *Psychol. et vie*, 1929, **3**, 157–158.—The article concerns a recent book by F. Paulhan, *Les Puissances de l'Abstraction* (The powers of abstraction).—*Math. H. Piéron* (Sorbonne).

187. **Dugas, L. Savoir s'ennuyer.** (The question of ennui.) *Psychol. et vie*, 1929, **3**, 162–164.—Ennui is the painful experience of being unable to become interested in current happenings. It is the depreciation of the present because of interest in the future or of regrets over the past. The author analyzes the ennui of certain famous *ennuyés:* Madame du Deffand, Vigny, Chateaubriand, and Flaubert. He finds that their lives prove that ennui does not prevent one from living one's life in the fullest sense of the term and that the study of the experiences of these *ennuyés* is quite comforting.—*Math. H. Piéron* (Sorbonne).

188. **Ey, H. L'anxieté morbide.** (Morbid anxiety.) *Prophyl. ment.*, 1929, **6**, 82–87.—The author engages in an analysis of various types of anxiety. There is a normal anxiety closely related to fear which is justified insofar as a reason exists for it. It usually disappears with the passing of the difficult situation. Anxiety is accompanied by distinct physiological changes,—acceleration of the pulse, vaso-motor disturbances, rapid respiration, etc. There is a form of anxiety which is manifested in the delirium and obsessions of the hypochondriac. This might be called "constitutional anxiety." Another form of morbid anxiety is produced by

sudden shock—which usually results in "pathological cowardice." "Melancholy anxiety" may be either passive or active. In both phases there is constant fear of disaster and a tendency toward suicide. The "anxiety of hallucination" is based on unfortunate situations which exist only in the mind of the afflicted. There are various biological factors involved in anxiety, including disturbance of the secretions of the liver, endocrines, and the kidneys. Since anxiety is an all too common ailment, it is deserving of psychological treatment which involves finding the causes underlying each particular case.—*D. M. Olson* (Clark).

189. **Fetscher, R. Einweihungsriten.** (Initiation ceremonies.) *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, **16**, 346–347.—A booklet regarding conditions in the Hamburg juvenile house of correction indicates the existence of many homosexual practices. The desirability of a dormitory as contrasted with nocturnal isolation should be investigated.—*H. Marshall* (Stanford).

190. **Gutheil, E. Impotenz und Gesetz. Beitrag auf Grund einer Krankengeschichte.** (Impotence and law. Paper based upon a case of illness.) *Allg. ärzt. Zsch. f. Psychotherap. u. psych. Hygiene*, 1929, **9**, 561–569.—The Austrian marriage laws are based upon the notion that impotence is organic only. A specific case of psychopathic impotence proves that such a law may do serious injustice to one party. It verifies the view of medical authorities that the responsibility of a husband in cases of "relative" impotence cannot be determined or separated from his wife's in the light of modern science.—*H. M. Bosshard* (Clark).

191. **Hellwig, A. Eheanfechtung wegen Beischlafsunfähigkeit.** (Dissolution of marriage on the grounds of inability to cohabit.) *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, **16**, 338–340.—Divorce or annulment cannot be granted in cases in which both parties are of such an age that at the time of the marriage the probability of successful intercourse was questionable. In such cases the assumption must be that the marriage was contracted for other purposes than sexual gratification or the begetting of children.—*H. Marshall* (Stanford).

192. **Herschan, O. Typologie der psychisch eheuntauglichen Frau.** (Typology of the woman who is psychically unfit for marriage.) *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, **16**, 323–337.—The psychically degenerate, psychopathic woman is unfit for marriage: this in spite of the fact that mild cases, under favorable environment (including a well-adjusted husband) have found such an association possible over long periods of time; likewise in spite of the fact that many of these psychopathic females are of high intellectual caliber. Marriage must not be considered as a cure for psychic degenerative states. Such a marriage becomes a curse to the husband and places the wife in an impossible situation. Moreover, eugenics demands that such female personalities should be prevented from propagating themselves.—*H. Marshall* (Stanford).

193. **Hesnard, A. Psychologie homosexuelle.** (Homosexual psychology.) Paris: Stock, 1929. Pp. 210. 12 fr.—In the six sections of this study the author considers, (1) the general psychological data of the problem of homosexuality; (2) the primary infantile survivals and mother imprint present in the homosexual individual; (3) the secondary infantile survivals; (4) the homosexual dissociation of tenderness and sensuality; (5) the relationship between homosexuality and neuroses, showing the psychological parallelism between the neuropathic and the homosexual individuals; and (6) female homosexuality, its psychological aspects, and its infantile origin. Footnotes but no bibliography.—*Math. H. Piéron* (Sorbonne).

194. **Kiesow, F. Sulla frequenza dei sogni gustativi ed olfattivi.** (On the frequency of gustatory and olfactory dreams.) *Arch. ital. di psicol.*, 1929, **7**, 226–231.—The author gives the reasons for the lesser frequency of gustatory and olfactory dreams as compared with the visual and auditory. He also points out that this frequency is greater than is believed, and that it is greatly influenced by the subject's interest in this sort of dreams.—*R. E. Schwarz* (New York University).

195. **Kingman, R. The insomniac.** *Med. J. & Rec.*, 1929, **129**, 683–687; **130**, 17–21.—Seriously questioning the current theories that sleep is of prime importance for the elimination of poisons and for the rebuilding of an exhausted body, the author cites the lengthier natural sleep of infants whose bodies are less toxic than those of adults, and makes the observation that the assimilating and rebuilding processes are more sluggish during sleep than at midday. Furthermore, sleeping is not regarded as a function of cerebral anemia, but of the free functioning of the sleep center in the vicinity of the third ventricle at its junction with the Sylvian iter. The anemia is merely an attendant phenomenon. Insomnia is an urban psychosis, due largely to an "overaddiction to business, social and intellectual pursuits." It may take one or the other of two forms. "Those who sleep eight hours and believe that they need ten consider themselves to be suffering just as much from insomnia as others who cannot get more than four or five hours sleep but who would be satisfied with six or seven." Both are "hemmed in by a vicious circle which passes through the four points of the idea of sleep, the idea of wakefulness, the emotion of longing for sleep, and the emotion of fear of wakefulness." Oddly enough, to resign oneself to wakefulness has the same salutary effect as to resign oneself to sleep. Relief for those who deem they need lengthy sleep is to be found in "readjustment of their habits of living to nature's demands, and in psychotherapy directed toward the removal of their predominating fear." The cure of the others "depends upon their learning, not how to sleep longer, but to stay awake longer, and upon psychotherapy which aims to replace their feelings of inadequacy with compensating interests and ambitions."—*R. C. Givler* (Tufts).

196. **Kleitman, N. Sleep.** *Physiol. Revs.*, 1929, 9, 624–665.—A comprehensive review of the literature on sleep. Bibliography of 137 titles.—*M. F. Fritz* (Iowa State College).

197. **Lambert, A. Narcotic addiction.** *J. Amer. Med. Asso.*, 1929, **93**, 1297–1301.—The experimental treatment of addicts carried on at Bellevue Hospital showed that no drug has a specific action in reducing the symptoms of withdrawal. Abrupt withdrawal is the simplest method of breaking the addiction and has an impressive mental effect upon the addict. A gradual withdrawal over a period of at least 14 days is the most humane method. The more fundamental task of ridding the addict of his habit permanently, or for a long period of time, requires a program of rehabilitation, in which the patient is adjusted to his environment and becomes a self-supporting member of the community. A large percentage of addicts are psychopathic, oppose any effort at rehabilitation, and prefer the up and down life of addiction to the more monotonous one of steady labor.—*G. J. Rich* (Boston Psychopathic Hospital).

198. **Lersch, P. Über das Icherlebnis.** (On the experience of self.) *Arch. f. d. ges. Psychol.*, 1929, 71, 67–126.—The author distinguishes three varieties of the self: the pure ego (a formal unitary reference point of conscious contents); the personal ego (comprising the inter-relations of mental states); and the individual ego (or awareness of organic uniqueness in contrast to the surroundings). Evidence for this distinction is to be found in the personality changes of puberty and schizophrenia and in the life of Goethe before and after his Italian journey. The author tested these views by presenting to six subjects twelve literary texts of a subjective or objective character. Mental states involving "awareness of an object" or "awareness of a condition" were thereby induced, some subjects responding typically in one way or the other. Emphatic reactions to poetry or fine prose are indicative of introversion. The author notes the relation of these findings to the two branches of mysticism —one involving retreat within, and the other leading to absorption in some object of contemplation. A characteristic contrast between male and female attitudes is also inferred from the data.—*G. W. Hartmann* (Pennsylvania State).

199. **Lersch, P. Die Bedeutung der mimischen Ausdruckserscheinungen für die Beurteilung der Persönlichkeit.** (The significance of mimetic expressions in the judging of personality.) *Indus. Psychotechn.*, 1928, **5**, 178–183.—The analysis of facial expressions can be of great practical value, as illustrated by cases in which the author describes distinctive movements of the eyes and mouth. Motion pictures of expressions in definite situations should be obtained and studied.—*A. W. Kornhauser* (Chicago).

200. **Leslie, F. E. Psychology of self. A talk to nurses.** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 1061–1064.—Personality is the manner in which the individual habitually reacts to inherent impulses which may be grouped under the headings: ego, sex, and herd instincts. The proper adjustment of these impulses to society makes for success.—*C. M. Louttit* (Hawaii).

201. **Mauerhofer, H. Individualität als Schuld.** (Individuality as guilt.) *Psychol. Rundschau*, 1929, **1**, 171–174.—An analysis of the origin and development of individualism from the totality of the *participation mystique* of the primitive state. The self reaches a recognition of the non-compulsory character of the tabu laws of the group, thus lifting the mind out of the feeling of the magic hold of the group-mind. But at the same time the individual is robbed of the primal reason of life, that sense of the religious union and origin of all life as a whole. When the individual thus isolates himself, a sense of guilt arises as he finds himself in *isolation tragique*. He finds no compensation for this part-of-a-whole existence and within him arises a sense of doom or destiny. Herein the author sees the cause of the present-day soul-restlessness. He believes there is only one solution, a return to a consciousness of the self as a unit in the social whole, an instrument in the furtherance of its ultimate purpose.—*A. B. Herrig* (Central State Teachers College).

202. **Meagher, J. F. W. Homosexuality; its psychobiological and psychopathological significance.** *Urologic & Cutaneous Rev.*, 1929, **33**, 505–518.—(Courtesy *J. Soc. Hygiene*).

203. **Menninger, K. A. The isolation type of personality.** *U. S. Naval Med. Bull.*, 1929, **27**, 609–620. —The term "isolated personalities" is proposed for those persons who would like to take their proper places in the social life which surrounds them but who feel unable to do so. This isolation may be built up by several factors including: geographic isolation, being an only child, esoteric home training, poverty or wealth, pathological parents or physical defects. Each of these is illustrated by case histories. The presence of a real or imaginary defect may give rise to a sense of inferiority which is described and discussed in some detail. Beliefs in imaginary defects may be built up by comparison of self with others, or by the influence of other persons, parents, playmates or colleagues.—*C. M. Louttit* (Hawaii).

204. **Mester, J. Pierre Janet és Freud lélektani eredményei.** (The psychological hypotheses of Pierre Janet compared with those of Freud.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 302–320.—The author points out the derivation of Freud's "psychoanalysis" from Janet's "analyse psychologique." The implication is that the only changes made were the vocabulary and the limitation of the causal factors to the domain of sex. A summary of Janet's system is given.—*D. E. Johannsen* (Wellesley).

205. **Morgan, I. L. The master-key of the psychiatric social worker.** *U. S. Vet. Bur. Med. Bull.*, 1928, 4, 348–359.—The author presents a tentative genetic analysis of the psycho-social factors in personality adjustment. Such factors as the urge of restlessness, new social situations with an evaluation

and adaptation, emotions, moods, sentiments, interests and opinions are all suggested as playing important parts. The theses are illustrated by quotations from biographical writings. This analysis is intended to assist the psychiatric social worker in her evaluation of personality and its satisfactory adjustment.—*C. M. Louttit* (Hawaii).

206. **Oberndorf, C. P. Diverse forms of homosexuality.** *Urologic & Cutaneous Rev.*, 1929, **33**, 518–523.—(Courtesy *J. Soc. Hygiene*).

207. **Papillault, —. Rapport de la psychanalyse et de la morphologie humaine.** (The relation of psychoanalysis to human morphology.) *Bull. Soc. d'étude des formes humaines*, 1929, **7**, 69–82.—The author's purpose is to show that these two branches supplement each other and that the union of biological ontogenesis as revealed by morphology and psychological ontogenesis as revealed by psychoanalysis can alone bring about a comprehension of human personality.—*Math. H. Piéron* (Sorbonne).

208. **Paulhan, F. Sur les signes du caractère.** (On character indications.) *Psychol. et vie*, 1929, **3**, 151–157; 173–178.—Everyone has a different mode of behavior according to the person with whom he finds himself. Character consists in a revamping of an infinity of characteristics according to the situation, though these variations are not the same in all individuals. Conduct does not always reveal the true nature of people, and we must not expect to find simple and well defined signs of character affording us a fixed interpretation of behavior data.—*Math. H. Piéron* (Sorbonne).

209. **Prasad, J. The conscious, the sub-conscious, and the unconscious.** *Indian J. Psychol.*, 1929, **4**, 72–88.—A critical consideration of many diverse views as to the nature of the conscious, the subconscious, and the unconscious. An attempt is made to define each precisely.—*F. A. Geldard* (Virginia).

210. **Rosanoff, A. J. Human sexuality, normal and abnormal, from a psychiatric standpoint.** *Urologic & Cutaneous Rev.*, 1929, **33**, 523–530.—(Courtesy *J. Soc. Hygiene*).

211. **Swan, T. H. A note on Kohlschütter's curve of the "depth of sleep."** *Psychol. Bull.*, 1929, **26**, 607–610.—A critical inspection is made of the tabulated data in Kohlschütter's work, tending to show certain unreliabilities therein.—*J. F. Dashiell* (North Carolina).

212. **Tenenbaum, J. The riddle of sex.** New York: Macaulay, 1929. Pp. xvii + 362. $3.50.—A systematic treatise covering all phases of the subject by a medical author; both normal and abnormal aspects are covered together with the cognate aspects of marriage. The treatment is onto- but not phylogenetic, and the style popular and hortatory.—*R. R. Willoughby* (Clark).

213. **Thoms, J. A. The practice of neurology: psychoanalysis and psychotherapeutics.** *Med. J. & Rec.*, 1929, **129**, 689.—Often the most idealistically minded people, who have rigidly suppressed ideas regarding the reproductive functions, may succeed in their repressions only to make themselves entirely inefficient, helpless, hysterical, neurotic cases. Reconstruction of their personalities through the aid of a sympathetic neurologist is imperative.—*R. C. Givler* (Tufts).

214. **Weisenberg, T. H. The study of normals.** *J. Amer. Med. Asso.*, 1929, **93**, 377–380.—A study of the errors made by normal persons in tests of aphasia (Head's) shows that they occur fairly frequently and that they are often exactly the same as those made by patients with aphasia. In some tests the percentage of errors in normals was so large as to make them worthless as a means of examining speech. Vibratory sensibility shows a marked diminution in otherwise normal individuals above the age of 50. In La Mar's series of tests of sensibility (appreciation of shape, appreciation of size, position of great toe, recognition of objects, appreciation of differences of texture), the errors made by normal individuals were functions of the factors of concentration and attention. In the field of secondary sex characters, norms of development were established. A comparative study of personality and constitutional factors failed to establish any definite correlation. Norms have been set up for the plantar reflex in children.—*G. J. Rich* (Boston Psychopathic Hospital).

215. **Wexberg, E. Individual psychological treatment.** (Trans. by A. Eiloart.) London: Daniel, 1929. Pp. 161. 6s.—Presents, with illustrative examples, the methods of cure advocated by Adler in psychological therapeutics. The book is predominantly practical in bent. A short list for further reading is included.—*F. C. Bartlett* (Cambridge, England).

[See also abstracts 292, 299, 321, 348, 370, 402, 442, 445, 447, 451.]

NERVOUS AND MENTAL DISORDERS

216. **[Anon.] Growth of body and mind.** *J. Amer. Med. Asso.*, 1929, **93**, 384.—The studies of mental patients by Wertham have shown a considerable percentage of abnormalities of somatic growth, especially in the schizophrenic psychoses. There seems to be a parallelism between the incidence of disorders of body growth and mental development prior to the onset of the psychosis.—*G. J. Rich* (Boston Psychopathic Hospital).

217. **[Anon.] Changing a liability into an asset.** *Med. J. & Rec.*, 1929, **130**, 647–648.—Cyclothymic personalities who have not become asocial enough to be committed to an institution may turn their disorder to considerable advantage if they can get insight into their condition, disbelieve in the permanence of their depressions, and make the most of their drives when in a state of elation.—*R. C. Givler* (Tufts).

218. **[Anon.] Proposed Institute of Medical Psychology in London.** *Psychiat. Quar.*, 1929, **3**, 636.—Plans are now announced for the establish-

ment in London of an institute similar to the New York State Psychiatric Institute and the Munich Institute. It is to be called the Institute of Medical Psychology. It is expected that the proposed institute will not only make it possible to extend the clinic services but also aid in the preparation and training of physicians, nurses and social workers in psychotherapy. The program includes the extension of the Tavistock Square Clinic building, the construction of a hostel for patients and a home for mal-adjusted children and the creation of a fellowship fund.—*E. T. Burr* (Vocational Adjustment Bureau).

219. **[Anon.] The New York City mental hygiene survey.** *Psychiat. Quar.*, 1929, **3**, 638.—This survey was carried out under the joint auspices of the National Committee for Mental Hygiene and the New York City Committee on Mental Hygiene. It deals with mental hygiene work in hospital out-patient department clinics, schools, social agencies, institutions for children, protective agencies, and courts for adults and children in New York City. It includes programs for raising the standards of preventive work along mental hygiene lines and there are definite recommendations as to what can be done to raise the calibre of psychiatric work with mental patients in out-patient department clinics.—*E. T. Burr* (Vocational Adjustment Bureau).

220. **[Anon.] Mental Deficiency Committee, report. Part III. The adult defective.** London: H. M. Stationery Office, 1929. Pp. 102.—This section, issued by a joint committee of the Board of Education and the Board of Control deals with the problem of mental deficiency in the adult. It consists of six chapters. The first five of these deal with the following aspects of the problem: (1) the law as it affects the adult defective; (2) present arrangements for the ascertainment and care of defectives by local mental deficiency authorities; (3) discussion of the findings of the committee's special investigation of defectives in England and Wales; (4) suggested future allocation of responsibility for adult defectives as to the provision for their care, training and control; (5) mental deficiency as a genetic and as a social problem. In the sixth chapter the principal conclusions and recommendations arising out of the committee's investigation are given in the form of a summary. The report finishes by pointing out the need for further special investigation and research in regard to the causation and prevention of mental defect, the further elucidation of the difference of incidence of defect in rural and urban areas, and the relationship between mental deficiency and other social problems.—*M. D. Smith* (Cambridge, England).

221. **[Anon.] Metropolitan Asylums Board, annual report for 1928–1929. Mental diseases section.** London: 1929. Pp. 133–354.—The Board responsible for the issue of this report deals with two groups of mentally disordered persons, the certified and the uncertified. These two classes cover types as different as chronic and harmless cases of imbeciles, sane epilepties, feeble-minded persons and poor persons over the age of 70 who have never been certified as lunatics, but who by reason of mental infirmity require institutional treatment. The first section of the report gives an account of the work done in the mental hospital service during 1928. It outlines the activities of seven institutions, which between them make provision for patients of both sexes and of all ages from three years upwards, and who vary greatly in degree of mental disorder. Each institution provides a report on the health of the patients; their training, occupation, physical training and recreations are discussed; the results of laboratory tests on patients are given, and any developmental work in progress is recorded. The last half of the report is composed of a series of four papers contributed by the medical officers of four of the institutions. In the first of these, entitled *Aesthetics and Mental Deficiency*, E. B. Sherlock discusses the interesting problem of the reaction of the mentally defective to the accepted canons of beauty. Two plates supply illustrations. The second paper contains R. M. Stewart's notes and photographs of some unusual cases of congenital syphilis; the cases of three cardiac rarities are described and illustrated in the third paper; the fourth consists of a note on the incidence of strabismus in mental defectives. Fourteen statistical tables relating to cases treated are given in the report.—*M. D. Smith* (Cambridge, England).

222. **Arató, G. Specifikus kurával kezelt agyi lues gyógyulási menetének ellenörzése neurologiás és psychologiás módszerekkel.** (Neurological and psychological control of a specifically treated case of severe cerebral syphilis.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 336–345.—A case study. A cure of the mental symptoms of a cerebrospinal syphilis case without a change in the neurological findings.—*D. E. Johannsen* (Wellesley).

223. **Baird, J. H. Unconscious symbolism exemplified in "a new language."** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 653–659.—A "report of a case belonging to the schizophrenic group . . . in which the construction of a 'new language,' having striking similarity to ancient symbols, occupies a prominent place in the clinical picture." Two plates of connected discourse, with translations, are presented in the "new language."—*C. M. Louttit* (Hawaii).

224. **Barlow, A. Ocular residua and sequelae of epidemic encephalitis.** *Arch. Ophth.*, 1929, **59**, 501–506.—A review of the literature reveals that epidemic encephalitis is often followed by complications involving the outer and inner musculature of the eye, e.g., vertical nystagmus, forced conjugate upward movements, paresis of accommodation, and, during and immediately after the disease, by the Argyll-Robertson pupil. 22 references.—*C. W. Darrow* (Behavior Research Fund).

225. **Davis, J. E. Competitive athletics in the treatment of mental cases.** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 243–246.—Calisthenics and other formal exercises are valuable in physiotherapy, but

for mental cases the socialization factor in competitive athletic games is perhaps of greater value. The writer has organized intra-mural contests in baseball, volley-ball, tennis, etc., and from these teams players are selected to represent the hospital in outside games. After five years this work evidences its value in inculcating attitudes of cooperation, the will to survive, and the will for accomplishment and mastery.—*C. M. Louttit* (Hawaii).

226. **Dearborn, G. V. N. Psychometric methods.** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 426–432; 539–544; 610–615; 684–691.—A discussion of the neurological, psychiatric, and psychological aspects of feeble-mindedness serves as an introduction to an evaluation of the use of mental tests with neuropsychiatric patients. Mental tests are useful in such cases to determine intellectual level, help in difficult diagnosis, aid prognosis by determining the presence or absence of regression or deterioration, and in questions of parole, discharge or further hospitalization. The author suggests the following tests as best adapted for use in neuropsychiatric hospitals: Binet-Simon (which is discussed test by test and their diagnostic values pointed out), Pintner-Paterson performance, Pressey X-O, Stenquist mechanical assembling and mechanical aptitude tests, Downey will-temperament, and the Healy picture completion No. II. The suggestion is made that every mental hospital should have a psychiatrist trained in the use of mental tests as a member of the staff.—*C. M. Louttit* (Hawaii).

227. **Denser, C. H. Diagnosis of chronic epidemic encephalitis.** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 106–115.—Chronic epidemic encephalitis is an infective process in the gray matter of the brain, particularly of the basal ganglia, with secondary degenerative changes. In children it may result in intellectual impairment and conduct disorders of an impulsive type. In adults there may be pronounced emotional changes as well as extensive physical disorders. The disease may be separated into three clinical groups, (1) parkinsonian syndrome, (2) hyperkinesthetic syndrome, (3) mixed syndrome. The typical clinical pictures of these three types are briefly described. Suggestions are offered for differential diagnosis between the disease in question and various similar conditions.—*C. M. Louttit* (Hawaii).

228. **Dereux, J. Syndrome de Parinaud transitoire au cours d'une poussée évolutive d'une sclérose en plaques probable.** (Transitory syndrome of Parinaud in the course of an advancing stage of a probable disseminated sclerosis.) *J. de neur. et de psychiat.*, 1929, **29** 272–276.—The syndrome of Parinaud, namely, a paralysis of the vertical ocular movements and of the movement of convergence, occurred in a man, 25 years of age, who in addition showed somnolence, cerebellar disturbances, nystagmus, but no anomaly of the pupillary reactions. A similar condition had existed a year before, but both times there was a complete remission. The probable diagnosis of disseminated sclerosis is discussed in its relation to the possibility of epidemic encephalitis.—*H. C. Syz* (New York City).

229. **Ditrói, G. Gyengeelméjü gyermekek szemlelete.** (Results of the ocular examination of feeble-minded children.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 346–351.—Results of testing 105 feeble-minded children for visual acuity, refraction, muscular equilibrium, and external developmental defects of the eye.—*D. E. Johannsen* (Wellesley).

230. **Divry, P. Camptocormie post-traumatique.** (Post-traumatic camptocormia.) *J. de neur. et de psychiat.*, 1929, **29**, 286–289.—Souques described in 1915 as camptocormia a syndrome of spinal curvature observed especially in soldiers after certain traumata; this condition is referred to in the German literature as hystero-traumatic kyphosis or kyphoscoliosis. The case of a man of 27 years of age is reported in whom this disorder developed, together with other manifestations of traumatic neurosis, two months after an accident which had caused a fracture of the lower jaw. The kyphosis was not traced to specific conditioning factors; it improved somewhat by suggestion.—*H. C. Syz* (New York City).

231. **Divry, P. Trois cas de myasthénie à évolution assez rapide.** (Three cases of myasthenia with rather rapid development.) *J. de neur. et de psychiat.*, 1929, **29**, 290–297.—A report of three cases of myasthenia in which death occurred from 7 to 16 months after the onset of the disease. The immediate cause of death in two of the patients was respiratory paralysis.—*H. C. Syz* (New York City).

232. **Doctor, K. Az öröklött és metalues serologiai kórismézésének kérdéséröl.** (The practical value of the Wassermann reaction.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 352–354.—The author discusses the conflicting results obtained by different investigators for the same sample; he feels that such conflicts are usually due to differences in technique and emphasizes the importance of care in making the test.—*D. E. Johannsen* (Wellesley).

233. **Doll, E. A. The problem of the feeble-minded in the community under changing social conditions.** In *The Problem of the Feeble-Minded in New Jersey* (N. J. Dept. of Institutions and Agencies, 1928, Publ. 14). Pp. 11–15.—A community of social incompetents, the Pineys of New Jersey, judged to be preponderantly feeble-minded, were found to be isolated when investigated in 1913. They are now thought to be increasingly a social menace. The Vineland 1927 investigation indicates that the improvement of transportation to this community and the improved pecuniary status of it is occasioning the dispersal of its families and is scattering its low-grade youths to the cities.—*R. C. Tryon* (California).

234. **Eller, J. J. Neurogenic and psychogenic disorders of the skin.** *Med. J. & Rec.*, 1929, **129**, 481–485; 554–559; 616–620; 675–679.—This fully documented account of practically all the known skin disorders, giving the pros and cons regarding

questions still under dispute, and paying heed to alternative terminology, divides dermal disorders into five main groups: (1) those due predominantly to psychic disturbances, (2) those frequently but not exclusively due to psychic disturbances, (3) those frequently associated with psychic disturbances, though not necessarily due to them, (4) those due to or associated with organic disturbances of the central or peripheral nervous system, and (5) those often attributed to disturbances of the vegetative nervous system,—the angio-neuroses and trophic disorders. Under skin disorders are included not only defects of the cuticle, but also of the hair and its roots, of the nails and their beds, of pigmentation and blood supply. Distinction is made between congenital and functional, and acute and chronic disorders, as well as actual changes of the appearance of the skin due to compulsive mutilations as contrasted with trophic changes. While "the modern dermatologist does not look upon the skin as an isolated organ, diseases of which have no influence upon the other parts of the body, or vice versa," nevertheless, "from the fact that dermal and psychic diseases often occur jointly as symptoms of the same cause," it is necessary to be wary in the diagnosis of skin diseases. Psychic and nervous disorders, psychic and autonomic disorders, and even psychic and trophic disorders often produce symptoms which may be readily confused. Dysfunction of the internal secretions may or may not produce simultaneous mental and skin changes. It is always necessary to be perspicuous regarding the circumstances under which the dermatoses become bona fide clinical entities. The author concludes that "it is vastly important that the dermatologist recognize the psychogenic and neurogenic origin of certain skin changes, for many of these conditions hardly come within the realm of dermatology and should be treated in collaboration with the neurologist."—*R. C. Givler* (Tufts).

235. **Flowers, H. L. A study of the emotions in psychotic patients.** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 309–321.—The Pressey X-O test was given to a group of 100 psychotic patients (83% were dementia praecox of various types). This group took an average of 65 minutes to complete the test, crossed out an average of 182 words, and had an average idiosynerasy figure of 57.46. Tables are presented showing the modal words chosen for each of the four tests by the total group, the paranoid praecox cases, and the hebephrenic praecox cases. Psychotics encircle more self-interest words and fewer sex-interest words than do normals. The writer feels that the test results correlate definitely with clinical findings, and in addition to this the tests are valuable in supplying information about the patient.—*C. M. Louttit* (Hawaii).

236. **Frankl, S. Hysteria az epilepsiában.** (Hysteria in epilepsy.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 355–362.—The epileptic individual inclines to hysterical symptoms; cessation of the epilepsy usually means cessation of the hysterical symptoms.—*D. E. Johannsen* (Wellesley).

237. **Gardner, D. M. Mental hygiene (a lecture to nurses).** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 562–566.—A brief semipopular account of the aims and methods of mental hygiene.—*C. M. Louttit* (Hawaii).

238. **Genil-Perrin, —. Les attitudes mentales vicieuses: Le "spleen."** (Vicious mental attitudes: "Spleen.") *Prophyl. ment.*, 1929, **6**, 75–77.—"Le spleen" or hypochondria is regarded as a serious ailment demanding strict medical attention. It is defined as a "feeling of morbid boredom accompanied by a distaste for life . . . and an inaptitude for living which is often carried to the point of suicide." It is the kind of ailment which many people, especially intellectuals, acquire voluntarily and take great delight in. This romantic malady provides a very pleasurable sensation, and there is usually little attempt on the part of the patient to rid himself of it. The increase of hypochondriac cases is alarming and may be traced to our recent social upheaval. Industrialization of life has proceeded at a pace which far exceeds the evolution of our physical and mental organism.—*D. M. Olson* (Clark).

239. **Guillain, G., Garcin, R., & Jonesco, —. Syndrome paralytique unilatéral global des nerfs craniens par métastase sur la base du crâne d'un épithélioma du sein.** (Unilateral global paralytic syndrome of the cranial nerves caused by a metastasis on the cranial base of an epithelioma of the breast.) *J. de neur. et de psychiat.*, 1929, **29**, 268–271.—A woman, 49 years of age, presented, after the removal of her left breast for carcinoma, a paralysis of almost all cranial nerves on the left side, but no motor or sensory disturbances of the extremities, nor signs of intracranial tension. The roentgenological examination showed alterations of the base of the skull, verified by autopsy as a metastasis involving the middle cranial cavity and the petrous portion of the left temporal bone.—*H. C. Syz* (New York City).

240. **Guillain, G., Mathieu, P., & Bertrand, I. La rigidité d'origine olivaire. Considérations sur une lésion vasculaire de l'olive bulbaire gauche avec atrophie secondaire de l'olive droite.** (Rigidity of olivary origin. Considerations in regard to a vascular lesion of the left bulbar olivary body with secondary atrophy of the right olivary body.) *J. de neur. et de psychiat.*, 1929, **29**, 265–267.—There are presented the symptomatology and the anatomical findings of a patient in whom there were bulbar lesions with a marked involvement of the olivary systems of both sides. In discussing the case the authors arrive at the conclusion that a lesion of the olives may be the cause of phenomena such as muscular rigidity, catatonia, bradycinesia and perhaps certain tremors similar to those observed in parkinsonian syndromes.—*H. C. Syz* (New York City).

241. **Guns, P. A propos du ganglion sphéno-palatin.** (In regard to the spheno-palatine ganglion.) *J. de neur. et de psychiat.*, 1929, **29**, 282–285.—A nasal syndrome, described by Sluder in 1908 and consisting of nasal hydrorrhea, lacrimation and paroxysms of sneezing, is discussed in its relation to the function of the ganglion spheno-palatinum. As experiments indicate, this syndrome may have its cause either in a sympathetic or parasympathetic disturbance.—*H. C. Syz* (New York City).

242. **György, J. Züllöttség és neurosis.** (Neglect and neurosis.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 270–289.—In investigating the mechanism of neglect in connection with the neglect of children, the author comes to the conclusion that neglect forms a thoroughgoing diseased condition of the whole personality, which is characterized by an insufficiency in the super-ego, and a tendency to direct everything away from the disturbing impulses. She compares neglect with the neuroses and finds these differences: (1) in the place of the release of the conflict, which occurs between the super-ego and the external world in the former, but between the super-ego and the id, in the latter, and (2) in the basic drives, which are characterized in the former by the tendency toward directing the sadistic components outward, while the positive components are directed inward, while the neurotic individual turns not only the positive but also the disturbing drives inward in the form of suffering and the different mechanisms of self-punishment. Neglect stands in the series of mechanisms which leads from the neuroses through the perversions to the psychoses, and stands between the two latter. The author seeks a cure in the solution of the conflict and a reconciliation of the individual with the external world, with a subsequent extension of the super-ego.—*D. E. Johannsen* (Wellesley).

243. **Hajós, S. Az epilepsia korai tüneteiröl.** (The early symptoms of epilepsy.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 373–377.—Ranschburg has indicated that not enough attention has been paid to those symptoms of epilepsy which precede the motor disturbances. Were they properly observed the later severer attacks could be foreseen; certain investigations have shown that 55% of the cases have displayed such premonitory signs.—*D. E. Johannsen* (Wellesley).

244. **Hegge, T. G. An experiment in the logical memory of subnormals.** *Tr. School Bull.*, 1929, **26**, 82–86.—An investigation of the memory of 110 children was made. The test material was a simple story. It was read and colored pictures illustrating it were shown. Subjects were tested by questions that required only single words or signs. This form of memory seems to have a fairly high correlation with general intelligence, .757, P.E. .0289. No total failures occurred before a M. A. of 5.3. Mental ages below 4.5 seem unlikely to profit from hearing stories, mental age 4.5 to 6.9 may profit, those above 7 seem to remember and comprehend.—*E. M. Achilles* (Columbia).

245. **Hillier, C. R. Oral infection in mental patients.** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 547–548.—Report of three cases of paranoid patients whose delusional states were greatly improved after removal of abscessed teeth.—*C. M. Louttit* (Hawaii).

246. **Howland, G. W. Value of occupational therapy in nervous diseases.** *Occup. Therap. & Rehab.*, 1929, **8**, 317–320.—Occupational therapy is of great value in the cure of organic and functional nervous diseases, and its future as a therapeutic measure lies largely in the hands of the occupational aides themselves. The education of such aides is an important problem. It is desirable to combine the training of surgical with that of the physiological or medical aides, who have a definite psychological emphasis in their training.—*H. E. Burtt* (Ohio State).

247. **Hudgens, J. C. The acute phase of schizophrenia.** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 521–523.—Two case histories are presented to illustrate the thesis that the chronic phase of schizophrenia is always preceded by an acute phase which is often overlooked.—*C. M. Louttit* (Hawaii).

248. **Hutchings, R. H. Psychiatric work in Vienna.** *Psychiat. Quar.*, 1929, **3**, 477–484.—The work of certain clinics is described.—*E. T. Burr* (Vocational Adjustment Bureau).

249. **Iles, U. G. Farm work for mental cases.** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 282–285.—An occupation that will divert the mental patient's mind from himself and that at the same time will lead to natural refreshing sleep is of value in therapy. The various tasks necessary on a farm afford these two advantages in a marked degree. The author has directed the farm work of 63 dementia praecox patients and reports improvement in many cases.—*C. M. Louttit* (Hawaii).

250. **Johnstone, E. R. A practical state program for the prevention or control of certain types of mental deficiency.** In *The Problem of the Feeble-Minded in New Jersey* (N. J. Dept. of Institutions and Agencies, 1928, Publ. 14). Pp. 41–45.—Investigation of the Kallikak, Piney and other New Jersey feeble-minded communities results in a proposed program by the Vineland Training School director which aims at a state prevention and control of feeble-mindedness. More extensive registration, segregation, training, and supervision of the mentally deficient are advocated, and greater care in the paroling of state wards and in the placement of children in foster homes is advised.—*R. C. Tryon* (California).

251. **Karpman, B. The problem of psychopathies.** *Psychiat. Quar.*, 1929, **3**, 495–525.—The redemption of criminals as a social problem must take into account the psychological fact that however similar may be the surface expressions of a particular type of crime, the motivation back of it may be greatly varied. The medical man viewing crime as a disease and the latter in terms of its etiology, recognizes that the treatment of crime must be according to the

particular etiology involved and that punishment and remedial measures must suit the motive and, back of that, the individual committing the crime. The author defines the psychopathies and gives one case study in much detail as illustrative of an individual who seems to present a compendium of almost all psychopathic reactions.—*E. T. Burr* (Vocational Adjustment Bureau).

252. **Kaufman, I. A paralysis progressiva maláriás lázkezelése gyógyhatásának ellenörzése psychologiás vizsgálatokkal.** (The psychological control of the effect of the malarial treatment of general paresis.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 378–399.—The effect on the mental deterioration of patients undergoing the malarial treatment for paresis was studied by means of regularly re-administered intelligence tests. Before treatment all showed degeneration in memory, in speech, and in the common school branches. After treatment the greatest improvement was found in the fields of memory and capacity for continued mental activity. Improvement was most marked 1½ to 5 months after the treatment, but continued in some cases for 12 months. The improvement correlated to a certain extent with the degree to which the patient had suffered from the fever. The improvement was also checked by judgments of the patients' relatives, etc. The improvement was the more marked for the less complex functions.—*D. E. Johannsen* (Wellesley).

253. **Kite, E. S. A study of mental deficiency in typical degenerate families.** In *The Problem of the Feeble-Minded in New Jersey* (N. J. Dept. of Institutions and Agencies, 1928, Publ. 14). Pp. 19–37.—The case histories of three degenerate families in the Piney community of New Jersey suggests the operation of a strong hereditary diathesis. Of the nine living children comprising the family of one "Old Mag," seven were judged as definitely feeble-minded. The sudden outcropping of a feeble-minded strain from two apparently normal lines was embodied in the person of one Ruella, illegitimate child of "black sheep" from two thrifty families. Though raised under superior conditions until 18 years old, Ruella eventually gravitated to the Piney level. Her six children were, like herself, feeble-minded. The whole Brooks family—two known grandparents, two parents, and six children—were judged to be mentally deficient. Their existence was characterized by incest, adultery, illegitimacy and complete social and economic incompetence.—*R. C. Tryon* (California).

254. **Krauss, S. Értelmi és erkölcsi elváltozások a nagyagyvelö fiatalkori szétszórt keményedése (Schilder-féle sklerosis periaxialis diffusa).** (Changes in the intellectual and ethical behavior in adolescence as a result of Schilder's diffuse sclerosis of the cerebrum.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 400–423.—A case study.—*D. E. Johannsen* (Wellesley).

255. **Lazar, K. Psychologias megfigyelesek epilepsias betegeken vegzett hyperventilational.** (Psychological observations in hyperventilation experiments on epileptics.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 424–436.—Great variability in the results of experiments is reported, the technique of hyperventilation not being well standardized. The observed phenomena of a psychological nature are described.—*D. E. Johannsen* (Wellesley).

256. **Lobmayer, G. Erkölcsi gyengeelméjüségszerü psychopathiás állapotok sebészeti gyógykezelhetöségéröl.** (Concerning the possibility of surgical treatment of morally imbecile-like severe psychopathological conditions.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 437–450.—A report of 4 severe cases of psychopathic personalities successfully treated by surgical operation. Only one was diagnosed as typically feeble-minded. Even constitutional mental and physical degeneration are no arguments against the possibility of success in this treatment.—*D. E. Johannsen* (Wellesley).

257. **Lord, J. R. [Ed.] Contributions to psychiatry, neurology and sociology.** London: Lewis, 1929. Pp. xiv + 401. 21s.—The volume is published by the Mott Memorial Committee in honor of the late Sir Frederick Mott. It contains 21 papers by colleagues and friends dealing with a great variety of different problems in the anatomy and physiology of the central nervous system, with the clinical examination of mental disorders, and with some of the social implications of the methods of treatment of mental disorder. Two personal notes are included, one by W. D. Halliburton on reminiscences, and one by C. von Monakow on Mott's life and work. A full bibliography is appended.—*F. C. Bartlett* (Cambridge, England).

258. **Magruder, C. L. Myxedema.** *U. S. Vet. Bur. Med. Bull.*, 1928, 4, 1048–1049.—Report of a case treated with thyroid extract and showing clearing up of the mental symptoms.—*C. M. Louttit* (Hawaii).

259. **Malzberg, B. A statistical study of the factor of age in the manic-depressive psychoses.** *Psychiat. Quar.*, 1929, 3, 590–604.—This study analyzes the manic-depressive psychoses with respect to some of the age variations. Such questions as the average age of first admissions with manic-depressive psychoses, the variation of rates of first admission per 100,000 of the population and how these rates are affected by environment, are studied. The results indicate that there is a slight correlation between age and the duration of the manic attack in recovered cases. This means that manic cases selected from the younger groups tend on the average to recover in slightly less time than the older cases.—*E. T. Burr* (Vocational Adjustment Bureau).

260. **Matz, P. B. Outcome of hospital treatment of ex-service patients with nervous and mental diseases in the U. S. Veterans Bureau.** *Psychiat. Quar.*, 1929, 3, 550–568.—A discussion is included of the more common nervous and mental diseases met within this group and the part played by the military service in their cause, progress and treatment.—*E. T. Burr* (Vocational Adjustment Bureau).

261. **McCarthy, D. Note on the vocal sounds of a blind-deaf girl.** *J. Genet. Psychol.*, 1929, **36**, 482–484.—Observations of a ten-year-old girl include: only spasmodic occurrences of vocalization; wide variety of sounds, mostly monosyllabic; vocal play; a 2-syllable combination evoked by a certain type of situation.—*J. F. Dashiell* (North Carolina).

262. **Meagher, J. F. W. Prognosis and significant reactions in mental disease.** *Med. J. & Rec.*, 1929, **130**, 390–393.—The article consists largely of juxtaposed quotations from the writings of Bleuler, Jelliffe, Jones, Kempf, Stekel, Abraham, Ferenczi, and Rank, to all of whom the author expresses his appreciations.—*R. C. Givler* (Tufts).

263. **Moore, L. Mental growth of low grade feeble-minded.** *Tr. School Bull.*, 1929, **26**, 88–95.—The aims were to locate the chronological age at which the mental development of the idiot may be expected to cease; to study the constancy of the IQ of the idiot; to determine, if any, the degree of correlation between chronological age and the onset of deterioration. Conclusions are that mental growth of the idiot ceases at a very early age, possibly under 10. The IQ of young retarded children is not constant but tends to decrease as the child becomes older. There is a mental deterioration in idiots which probably begins at an early chronological age.—*E. M. Achilles* (Columbia).

264. **Nelson, J. A. Post-traumatic aphasia.** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 706–708.—Report of the case of a negro who had been struck in the left frontal region with a cleaving axe. There were no appreciable mental variations except total aphasia.—*C. M. Louttit* (Hawaii).

265. **Overholser, W. The rôle of psychiatry in the administration of criminal justice.** *J. Amer. Med. Asso.*, 1929, **93**, 830–834.—Although the question of a defendant's mental fitness to stand trial is recognized by the law, there is not any certainty under the present scheme that a mentally unfit person will not be put on trial. The legal idea of criminal responsibility has undergone a gradual development, but in spite of the recent advances in psychiatry and psychology the rule established in 1843 is still the governing principle in most jurisdictions. The expert, who was originally an adviser of the court, has gradually become a partisan in the trial, with all the undesirable features of "expert testimony." A restoration of his former status has been attempted in Massachusetts, where in certain classes of cases the defendant is examined before trial by physicians of a state administrative department and the report is made available to the various parties to the trial. It is becoming increasingly evident that the disposition of offenders according to the nature of the offense alone is not satisfactory as a means of protecting society. For such protection there are two desiderata: the reformation of the reformable; and the permanent segregation of those whose incurable criminal traits unfit them for a place in society. Though not infallible, psychiatry can be of service in identifying these groups In correctional institutions, psychiatry and psychology are of value with respect to matters of occupation, recreation, discipline and parole. But the psychiatric clinics seldom operate in connection with the county jails, where 90% of all offenders are committed.—*G. J. Rich* (Boston Psychopathic Hospital).

266. **Peck, M. W. Nature and treatment of the neuroses.** *Med. J. & Rec.*, 1929, **130**, 386–387.—Peace-time neuroses differ from those of war time in the greater subtlety of the symptom formations by which solutions for mental conflict are attended. Whether strict psychoanalysis or some other method is used, when rapport is finally obtained, it requires tact on the part of the operator to direct the battle away from the scene of a futile conflict to a more successful one that abolishes the conditions which caused the symptoms.—*R. C. Givler* (Tufts).

267. **Ráth, K. Az orthopaedia szerepe a munkaalkalmasság kérdésében.** (The problem of orthopedics in the determination of a capacity for work.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 152–157.—An experiment is described in the vocational rehabilitation of physical, particularly manual, defectives. The essential point is that the advisor himself understands all the factors in the specific case and also all the movements necessary for the execution of whatever manipulation is required. The author emphasizes the fact that adequate treatment has frequently been handicapped by lack of knowledge regarding precedent in similar types of difficulty.—*D. E. Johannsen* (Wellesley).

268. **Rea, R. H. Notes on neurasthenic types.** *U. S. Vet. Bur. Med. Bull.*, 1929, **4**, 18–21.—A short review of the symptomology of neurasthenia as related to the personality of the patient, his nervous and glandular organization, and the accidental happenings that may constitute the immediate etiologic factor. The necessity in diagnosis of eliminating all possible organic disorders, and of avoiding suggestion of further ailments to the patient is emphasized. Successful therapeutic management rests largely on an adequate sympathetic relation between the patient and the physician.—*C. M. Louttit* (Hawaii).

269. **Reynolds, P. E. Neuropsychiatric disease (with history of onset following exposure to tetraethyl lead).** *U. S. Vet. Bur. Med. Bull.*, 1928, **4**, 147–148.—History of a case showing pronounced lack of initiative and ambition a year after exposure to tetra-ethyl lead.—*C. M. Louttit* (Hawaii).

270. **Rezende, G. A. Um caso interessante de estupor catatonico.** (An interesting case of catatonic stupor.) *Ann. da Colon. de Psychopath.*, 1928, **1**, 347–359.—*J. W. Nagge* (Chicago).

271. **Robie, T. R. Extra-mural psychiatric clinics in Massachusetts.** *Psychiat. Quar.*, 1929, **3**, 526–538.—The Division of Mental Hygiene of the Massachusetts Department of Mental Diseases conducts extra-mural clinics in the cities of Boston, Lawrence, Lowell, Reading and Beverly. The methods used in Thom's clinics in certain difficult behavior

disorders are described. The usual procedure in the psychiatric clinic conducted by Healy and Bronner is set forth in some detail. The great bulk of the cases coming to this clinic are referred directly from the Juvenile Court after being apprehended by the police for some type of delinquency. Each case is taken up under the following headings: physical examination; psychological examination; delinquency (enumerated); background of the child; causation, or the factors which initiated the delinquency; the outlook, or prognosis; and the recommendations which seem for the best interests of the child.—*E. T. Burr* (Vocational Adjustment Bureau).

272. **Schaller, W. F., & Somers, M. R. Psychogenic factors and precipitation point in the post-traumatic neuroses.** *J. Amer. Med. Asso.*, 1929, **93**, 967–971.—The post-traumatic neuroses do not differ essentially from other forms of neuroses. In addition to the trauma, most cases yield on analysis a surprising wealth of other adverse mental complexes and influences. A characteristic of the post-traumatic neuroses is the striking discrepancy between the claimed occupational inefficiency of the patient and the dearth of objective signs of disability. Another characteristic is an unusual course of the efficiency or work curve when once an increase of efficiency is established. There is either an arrest of the expected gradual increase or a decided falling off in total efficiency. This point of negative departure, when fitness is expected to parallel restored organic function, is called the precipitation point. It usually occurs several months after the injury. It is suggested that the precipitation point, when recognized, be taken as the basis of an approach to a financial settlement of the case. It is at this time that the psychoneurosis starts. A post-traumatic neurosis, when established, runs a relatively long course, and is resistant to the ordinary forms of medical treatment.—*G. J. Rich* (Boston Psychopathic Hospital).

273. **Schiff, D. Le premier congrès allemand d'hygiène mentale.** (The first German mental hygiene congress.) *Prophyl. ment.*, 1929, **6**, 78–81.—The author, as a delegate to the European Committee of the International League for Mental Hygiene, reports their first Congress held in Germany. There were 3000 present at the Congress in Hamburg, which lasted from the 19th to the 21st of September, 1928. Problems discussed were not limited to those of clinical psychiatry. Among the questions treated were sanity, applied psychology, and asylum problems and their relation to mental hygiene. Work in the field of mental hygiene encounters fewer obstacles in Germany where the population is more easily subordinated to laws for the control of the mentally afflicted. The French are more individualistic, and, therefore, more opposed to socially controlled isolation of mental cases. The Congress discussed plans for a reunion of the Latin, Pan-American, and European Leagues for Mental Hygiene in a great International Congress of 1930.—*D. M. Olson* (Clark).

274. **Schultz, F. H. Experimentelle Psychologie und Psychotherapie.** (Experimental psychology and psychotherapy.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 267–269.—A theoretical discussion of the real meaning of psychotherapy, its advantages and dangers.—*D. E. Johannsen* (Wellesley).

275. **Steen, R. R., & Steen, P. H. Pubertas praecox (Review of literature with special reference to etiology; report of a case with conduct disorder).** *Psychiat. Quar.*, 1929, **3**, 539–549.—The condition of precocious sexual development is rare, only 203 published case reports having been found to date. A brief review of these reports is given together with a bibliography. The authors then discuss in some detail the case of a boy of seven and a half years who was committed to Kings Park State Hospital. There is little etiological significance in the case report, and, in the absence of definite proof, the suggestion is offered that the partially closed sella turcica, through pressure on the hypophysis, may have brought about a glandular inbalance which has led to the existing syndrome in a child whose family history shows a possible predisposition to endocrine dysfunction.—*E. T. Burr* (Vocational Adjustment Bureau).

276. **Swift, W. B. The speech in medicine.** *Med. J. & Rec.*, 1929, **130**, 192–195; 260–262.—An account of the value of vocal sounds in the diagnosis of mental diseases. To the generally recognized speech signs in general paralysis, multiple sclerosis, and epilepsy, the author takes the responsibility for adding similar signs of chorea, tabes dorsalis, progressive muscular atrophy, feeble-mindedness, athetosis, amyotonia exquisita, and myasthenia gravis. Comment is made upon the difference between speech indices of normal and supernormal mentalities and of genius. "Dementia precox is the only psychosis for which no pathognomonic speech sign has been discovered." Defective structures of ears and mouth are detectable by the tonal qualities. Abundant diagnostic signs are thus provided in neurotic, psychotic, and somatic diseases. A volume is promised on the subject.—*R. C. Givler* (Tufts).

277. **Szondi, L. A neurasthenia kórképének kettéválasztása.** (The clinical and pathogenic differentiation of neurasthenia.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 471–493.—The three-fold problem of this work is: (1) Can neurasthenia be divided from the constitutional point of view into two parts (as is recommended by Stiller)? (2) Does this bifurcation lead one farther as to its pathogenesis? (3) In case this is possible, where is the difference in the pathogenesis of the two cases to be sought and do we possess certain signs for the pathogenic differentiating of the two classes? The author holds that such a dual classification is possible both from the mental and from the physical point of view; the names given the two classes are *neurasthenia apathica* and *neurasthenia irritativa*. The pathogenesis is different for the two kinds, and these differences are given, the most important one

being the flat blood-sugar curve of the *apathica* type. —*D. E. Johannsen* (Wellesley).

278. **Thompson, B. A. The relationship of tuberculosis to mental diseases.** *Med. J. & Rec.*, 1929, **129**, 690–693.—"The mental attitude in disease and its treatment is more important than the disease itself." It is the author's belief "after dealing with the perturbed minds of those suffering from tuberculosis, particularly the psychoneuroses, and even of the normal individual, that the mental state is the deciding factor in their cure."—*R. C. Givler* (Tufts).

279. **Toulouse, —. Les types affectifs.** (Affective types.) *Prophyl. ment.*, 1929, **6**, 59–62.—Wide observation of mental ailments has given the author opportunity to note great inequalities in personality make-up among individuals. He stresses enormous individual differences in emotional tone. In this article, discussion is limited to two opposed emotional "types," the "déprimé" or depressed type, and the "expansif" or unreserved type. The depressed type is indifferent to life in general and has distinct suicidal tendencies, whereas the unreserved type enjoys life to the full and has an extreme optimism of the sort commonly found by psychologists in dealing with hypomaniacs. Some attempt is made by the author at classifying certain historical characters according to these extreme types. There need not necessarily be any correlation between emotional tone of an individual and his particular environment. Children tend toward the unreserved type; aged people toward the depressed type. Men in general are more unreserved; women, more depressed—as concluded from the number of women patients being treated for melancholia at psychiatric clinics. 80% of the patients manifesting suicidal tendencies are women. These differences in emotional tone apply as well to races and various animals.—*D. M. Olson* (Clark).

280. **Tracy, E. A. Epilepsy, a disease entity.** *Med. J. & Rec.*, 1929, **130**, 389–390.—Relying on Echeverria's analysis, made in 1870, the author holds that the numerous modalities of epilepsy are unified in every case by the presence of diseased fibers of the vegetative system, and which are manifested by objective signs so characteristic that a diagnosis of the disease between seizures is possible by means of them.—*R. C. Givler* (Tufts).

281. **Vaux, C. L. Habit training.** *Occup. Therap. & Rehab.*, 1929, **8**, 327–330.—Habit training aims at the socializing and normalizing of the patient. At a separate dining service, table manners are taught. The patients are put on a definite schedule for the whole twenty-four hours. If they can be kept busy, they will have no time to lapse into their bad tendencies. The varied activities tend to socialize them as they live and work together. Close attention is paid to personal hygiene.—*H. E. Burtt* (Ohio State).

282. **Vértes, O. J. Siketnéma gyermekek emlékezete.** (Memory in deaf-mutes.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 210–216.—The problems were to investigate differences between the memory of deaf-mutes and normal children, the kinds of memory affected and the degree, and the amount and kind of imagery found in deaf-mutes and its effect on memory. 69 students from 9 to 17 years old in the state deaf asylum were studied. The results show that: (1) Memory for numbers and words recalled by sound images is worse in the deaf-mutes than in the normals. (2) Words designated by touch images are remembered better by the deaf than by the normals. (3) There is no sharp distinction between normals and deaf-mutes in memory for things. (4) The words which are most dependent on the auditory sense are the most difficult to retain and reproduce; those dependent on touch images are the easiest. The author concludes that the lack of audition means not only the gradual loss of the sense, but also a complete reorganization of the whole mental life.—*D. E. Johannsen* (Wellesley).

283. **Wallace, G. L. Some of the conditions met with in the feeble-minded, with special reference to the state program of care provided and the importance of hand training in their education.** *Occup. Therap. & Rehab.*, 1929, **8**, 321–326.—Feeble-mindedness is a difference of degree only, but the feeble-minded differ widely from one another; some are industrious and others are indolent. The emotionally unstable group of feeble-minded constitute a particular problem. The difficulty does not become acute, usually, until adolescence. At that time social adjustments become very difficult. Emotionally unstable feeble-minded profit from a systematic habit-training regime. Training the hand is particularly important because the incumbent will never be able to earn a livelihood by any other means. This has some further contribution to their social education because of the satisfaction derived from doing something satisfactorily with the hands. Academic education up to one's mental level enables one to enjoy life better, but beyond that point is futile. Massachusetts has a systematic program of identifying, registering, educating, supervising and segregating the feeble-minded of the state.—*H. E. Burtt* (Ohio State).

284. **Yepsen, L. N. A case of congenital auditory aphasia.** *J. Genet. Psychol.*, 1929, **36**, 484–489. —A case of normal intelligence with this special defect was analyzed, and is described as typical of this condition.—*J. F. Dashiell* (North Carolina).

[See also abstracts 62, 171, 172, 195, 213, 290, 367, 382, 413, 419.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

285. **Adler, M. J. Music appreciation: an experimental approach to its measurement.** *Arch. of Psychol.*, 1929, No. 110. Pp. 101.—The present research is the application to the field of music of the well known method of testing and studying likes and dislikes. The achievement was the creation and development of a test instrument with which to explore taste in music. The following purposes were served: (1) the classification of preferences for one or another kind of musical object, (2) the analysis of

the several factors related to the various kinds of preference factors, (3) the consideration of the pedagogical usefulness of the test instrument for diagnosis and classification of prospective students in music. The project of investigating musical taste by the Abbott-Trabue method was undertaken. Series A consisted of six sets each containing four musical selections. The six "originals" were selected for their excellence either in rhythm, harmony or melody. Each was distorted in three ways (dull, sentimental, chaotic), so that with the original it had four versions, O, D, S, C. The subject was given a record blank with questions about musical education and space for judgments. 696 cases were tested and the data indicated a justification for the idea of the test instrument, and suggested the technique for a more adequate examination of musical taste. There is a close relationship between the amount of training of the subject and his test score. For Series B the record sheet was administered differently. The subject was asked whether he liked or disliked the selection. Tables and curves are reproduced fully. The music tests were recorded on Duo-Art music rolls by the Aeolian Company of New York.—*E. M. Achilles* (Columbia).

286. **Benham, E. The creative activity. Introspective experiments in musical composition.** *Brit. J. Psychol.*, 1929, **20**, 59–65.—In this investigation the subject sat, in quiet surroundings, with pencil and paper and composed melodies, a record of the introspectively observed accompaniments being kept. One series of experiments was designed to elucidate the effect of various mood-sets, e.g., joy, sorrow, peace, when the subject adopted the appropriate bodily attitudes and moods before composing. The average time taken in writing a melody of nine measures was 60–70 seconds. Definite evidence can be obtained of motor sensations which may be allied with the rhythmical aspects of the music, and of various forms of imagery. Auditory imagery is strongest at the emergence of the idea.—*H. Banister* (Cambridge, England).

287. **Bernard, R. Amateurisme et critique.** (Amateurism and criticism.) *Psychol. et vie*, 1929, 3, 144–148.—*Math. H. Piéron* (Sorbonne).

288. **Bernelot-Moens, H. L'anthropologie nouvelle et l'avenir de la civilisation.** (The new anthropology and the future of civilization.) *Psychol. et vie*, 1929, **3**, 129–131.—The author proposes to replace the present human racial divisions by a classification based, not on certain physical characteristics, but on specific human characteristics which are dependent upon moral character and intelligence. He proposes five divisions: uncivilized man, civilized man, humanized man, cultivated man, and perfect man. He thinks that those who hold a high place in this classification because of more favorable circumstances should, through their example, aid those below them to evolve further.—*Math. H. Piéron* (Sorbonne).

289. **Booth, M. Woman and society.** New York: Longmans, Green, 1921. $3.00.—*W. S. Hunter* (Clark).

290. **Bowers, P. E. William Edward Hickman.** *Med. J. & Rec.*, 1929, **130**, 79–82; 139–142.—Hickman was entirely sane, but "deliberately chose wrong companions and a life of crime, because he thought that crime was the quickest way in which to acquire the things which he desired."—*R. C. Givler* (Tufts).

291. **Boynton, P. A study of the relationship between the intelligence and moral judgments of college students.** *G. Peabody Coll. for Teachers, Contrib. Educ.*, 1929, No. 51.—This study was made from test data obtained from the examination of 243 students in the department of psychology at the University of Kentucky. The Army Alpha was used to measure intelligence and results were correlated with the Boynton Moral Judgment Test. Lack of relationship between intelligence and moral judgment as measured is probably the outstanding characteristic of this study. Both boys and girls of high ability deviate more on moral judgments than do the average or low in ability. Girls of a high intelligence hold to a single standard more than do girls of a low intelligence. The age of the student has little influence on his moral judgments. The author does not identify morality with judgment of morality in this test.—*S. C. Garrison* (Peabody College).

292. **Brachfeld, O. Über den Geschlechtswechsel in Sagen und Märchen.** (Changes from one sex to the other in legends and fairy-tales.) *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, **16**, 318–323.—In the limitless ability to change form found in the hero-myths of all primitive peoples, one rarely finds cases where there is a change of sex. Occasionally a human becomes an animal of the opposite sex, either as a device of escape from pursuit or as the result of a charm or curse; but the number of cases is relatively small in which the change is from a man to a woman or from a woman to a man. Three such cases are cited from the literature. The psychanalytic school would explain these on the basis of the "castration complex," since for a man to be changed into a woman is a source of shame and degradation. Adler states that in every case of a neurosis in a male he finds a tendency in that individual to stress feminine characteristics, and an uncertainty as to his masculinity. This seems a more acceptable explanation of these cases.—*H. Marshall* (Stanford).

293. **Cabot, E. L. Temptations to rightdoing.** Boston: Houghton Mifflin, 1929. Pp. xvii + 311. $2.50.—An informal discussion, freely illustrated with quotations, anecdotes, and excerpts from class exercises in ethics, of the means by which people, particularly children, are attracted to rightdoing. The most potent influence is that of persons—the "artist mother," the "poet father," the social worker who knows the value of interpreted experience. A leader, to be a temptation to right, must be himself following a fruitful cause and must compel leadership in his followers. Eight ways of becoming a temptation are: by creating standards; by skillful

criticism; providing an atmosphere of growth (genuineness, geniality, generosity); understanding character types; response to the strength of youth; immanence (sympathy with persons and situations); transcendence (making the child's will one with the will to do right). Suggestions are given for reading in each grade from one to eight. Direct training in ethics is desirable in the school but not in the home. Interest, responsibility, and beauty compel goodness. Prayer is the greatest of all temptations to rightdoing.—*M. P. Montgomery* (Faribault, Minn.).

294. **Elliott, S., Rackliffe, J., Buxton, J. R. D., Fitzgerald, R. S., Wilbur, R., & Anderson, A. M. What is the psychological effect on the national mind of great armed forces maintained ostensibly for national defense?** New York: Brooks-Bright Foundation, 1929. Pp. 143. $1.00.—Six prize essays by young Americans of high school age which condemn great armaments for national defense because they breed fear, destroy confidence in peace, and create a body of men taught to think in terms of force.—*W. C. Poole* (Worcester, Mass.).

295. **Gottschall, A. W. An experiment in adult religious education.** *Rel. Educ.*, 1929, **24**, 726–728.—After meeting with doubtful success with the conventional methods of religious teaching, a pastor had the members of his congregation hand in their personal problems. These were used instead of texts for the Sunday sermon, and an effort was made to solve them by references to biblical teaching. This method resulted in an increased interest and appreciation of the religion of Jesus. Employing the prayer meeting period for the discussions of the preceding sermon has been similarly successful.—*J. P. Hylan* (Stoneham, Mass.).

296. **Gray, C. T., & Bingham, C. W. A comparison of certain phases of musical ability of colored and white public school pupils.** *J. Educ. Psychol.*, 1929, **20**, 501–506.—A comparison is made of the scores of 258 negroes and 219 whites, mainly from Grades VII and VIII, on the Seashore Tests of Musical Ability. The median score for the white pupils exceeds that for the colored in all tests save that for consonance, where the scores are nearly equal. When subjects with musical training are compared with the untrained, the whites are superior to both negroes and mulattoes, and mulattoes to negroes. Training is most effective upon pitch and memory, and least effective upon intensity and time. The correlations between total music score and index of brightness are: colored boys, 0.580; colored girls, 0.534; white boys, 0.700; and white girls, 0.677.—*J. A. McGeoch* (Arkansas).

297. **Griffith, H. Time patterns in prose. A study in prose rhythm based upon voice records.** *Psychol. Monog.*, 1929, **39**, No. 3. Pp. 82.—Using Shepard's device for making voice records, the author studied the rôle of time in the rhythm of prose. The investigation did not include other prose rhythms; namely, stress, pitch, and tone-color. Selections from four types of prose were read aloud by nine adult readers, and the records were analyzed in terms of pause, sound units, and rate. The results show that the time pattern of prose is determined by the duration of silent periods, the duration of sounds, and changing tempo. Pause is not determined by the necessity of breathing; it is utilized more by trained than by untrained readers. 89.4% of all punctuation marks were paused; 22.93% of all pauses were made at points where there were no punctuations. All good prose tends to be rhythmic: older prose is spaced, while modern prose shows rhythm in its movement. The temporal factors which determine rhythm in modern or fluid prose are analyzed.—*F. A. C. Perrin* (Texas).

298. **Hampe, T. Crime and punishment in Germany.** (Trans. by M. Letts.) New York: Dutton, 1929. Pp. viii + 175. $3.50.—Accounts of the methods of punishing criminals, the crimes, the latitude shown in certain cases, and descriptions of the malefactors in 16th and 17th centuries in Germany, together with quotations from contemporary records. Profusely illustrated.—*W. C. Poole* (Worcester, Mass.).

299. **Hartshorne, H., & May, M. A. Studies in service and self-control.** New York: Macmillan, 1929. Pp. xxiv + 559. $2.75.—This is the second volume of the report of the findings of the Character Education Inquiry. In the first volume, entitled *Studies in Deceit*, the tendency to deceive is selected as the unit for objective study; in the present one a study is made of: (1) service—the tendency to work for self *vs.* the tendency to work for others,—and (2) self-control—the tendency to continue engaging in an approved act *vs.* the tendency to engage in an interesting but disapproved act. Various tests of actual behavior were devised and given to large numbers of school children. For example, the tests used for service were as follows: (1) a test to see if a child would prefer to help his class win a prize or to compete for an individual prize; (2) a test to determine whether a child would vote that certain money belonging to the class should be spent for the class, or that it should be used for some philanthropic cause, or that it should be distributed to individuals in the class; (3) a test to determine whether a child would work harder in learning a novel task when there was a social motive, or when there was a chance for individual gain; (4) a test to determine whether or not a child would share the contents of a kit which had been given him with some needy children whom he did not know; (5) a test to determine if a child will collect pictures, stories, or jokes for children in unfortunate circumstances; (6) a test to determine whether a child will work more arithmetic examples when stimulated by the motive of individual gain or by the motive of group gain; (7) a test to determine whether a child will work for self or group or both at a monotonous and fatiguing activity when he has a free choice. A similar set of tests built on the same principles were used for the measurement of self-control. The measures of the children on each of these two sets of tests are studied

in their relation to various factors, such as age, school status, Sunday school attendance, home environment, intelligence, emotional condition, etc. The authors find that the friends a child goes with, his class-room code, the nature of his school adjustment, and the example of his parents are definitely related with tendencies to be of service, but that age, intelligence, sex, emotional conditions, and sociability of a child have little to do with such tendencies. Children who are members of Sunday schools and clubs are slightly more cooperative than non-members. It was found that age, intelligence, nervous stability, and power to resist suggestion are related to an appreciable degree with persistence, but culture and economic status show only a very slight relation to this trait. Sunday school attendance is positively correlated with persistence, but the correlation is small. In discussing the educational implications of their finding the authors take the attitude that tendencies to be of service and tendencies toward self-control are specific rather than general, and that these specific tendencies are learned. Their attitude toward methods of teaching may be summarized by the following quotation: "The teaching of cooperation, charity, and self-control requires (1) careful planning of situations to which these activities are the natural and successful response, (2) provision for building a group morale which supports the desirable mode of conduct, and (3) increasing complexity and difficulty of situations in order that general principles may emerge and be brought into play for the guidance of conduct and the integration of behavior."—*V. Jones* (Clark).

300. **Havemeyer, L. Ethnography.** Boston: Ginn, 1929. Pp. vi + 522. $4.80.—The environmental and racial characteristics, self-maintenance, self-perpetuation, self-gratification, religion and regulative organization of the African blacks, the Australasian blacks, the Negritos, the tribes of Borneo, the Polynesians, the Eskimos, the North American Indians, the Aztecs, the Incas, the Tibetans, the Yakuts, and the Hindus are described. The book is profusely illustrated and contains a large bibliography and index.—*N. L. Munn* (Pittsburgh).

301. **Kaiser, L. Bemerkungen über die Wichtigkeit des Speichels beim Sprechen.** (Observations on the importance of saliva in speech.) *Monatsschr. f. Ohrenhk.*, 1928, **62**, 853–856.—The presence of saliva in the mouth affects pronunciation. An astringent (catechu) is found to shorten, and an acid (tartaric) to prolong the pronunciation of the explosives *p*, *t*, and *k*.—*C. W. Darrow* (Behavior Research Fund).

302. **Laird, J. The idea of value.** London: Cambridge University Press, 1929. Pp. xx + 384. 18/6.—Primarily a philosophical treatise, this volume is nevertheless psychological in parts. It attempts an analysis of the notion and experience of value, offers a critical consideration of the theories of Meinong and of many predominantly psychological British contributions, and is sympathetically inclined towards recent pattern, *Gestalt* and *schemata* theories. There is also a discussion of theories of the possible measurement of values.—*F. C. Bartlett* (Cambridge, England).

303. **Mackenzie, J. S. A manual of ethics.** London: Clive, 1929. Pp. xii + 426. 9/6.—The sixth edition of this well-known textbook contains some new material, particularly in answer of criticisms by G. E. Moore and Dean Rashdall.—*F. C. Bartlett* (Cambridge, England).

304. **Manuel, H. T., & Wright, C. E. The language difficulty of Mexican children.** *J. Genet. Psychol.*, 1929, **36**, 458–468.—The determination of degree of language handicap of school children from Spanish-speaking homes was approached by the new method of using parallel Spanish and English editions of a standardized reading test. Trial of the two tests on two groups of students whose native language was Spanish and English respectively, yielded incidental but not conclusive results; further experimentation is projected.—*J. F. Dashiell* (North Carolina).

305. **Meloun, J. Objective Kontrollmethoden in der Schriftpsychologie.** (Objective control methods in the psychology of handwriting.) *Arch. f. d. ges. Psychol.*, 1929, **71**, 357–368.—The author reviews critically the efforts of today in both Germany and France to establish a science of graphology, especially as these concern themselves with the finding of a relationship between form of writing and criminal tendencies. He compares the methods of Binet, Klages, Bobertag, Saudek, and Crépieux-Jamin. In his opinion the work is still primitive, the chance of error in judgment great. Until better objective measurements can be substituted for personal judgment, no reliability can be placed upon the conclusions. The judgment of character is most liable to error, as the analysis of a number of isolated characteristics does not give a picture of the totality of the personality. There is an optimistic note in the article. With better analysis of other factors entering into handwriting and better control of the personal equation of the judge, it is quite possible that a fairly accurate procedure for judgment may be made available.—*A. B. Herrig* (Central State Teachers College).

306. **Meyer, M. F. The musician's arithmetic. Drill problems for an introduction to the scientific study of musical composition.** *Univ. Missouri Stud.*, 1929, **4**, No. 1. Pp. 149.—This volume includes material which has been used in mimeograph form for some years at University of Missouri and Stanford. It offers both theory and experiment to combat the mythology which has long been present in the most mathematical of the arts, music. The history of scales and intervals is discussed at length. The simplicity of the ratios employed in early scale structure is held to be due to the conductive properties of nerve fibers—a chemical phenomenon—and not to the presence of overtones. This notion is basic to Meyer's theories. Problems are given after every few paragraphs of discussion. There are nu-

merous diagrams and a picture of Meyer's quarter tone organ. Samples of quarter tone music are written on a specially constructed musical staff. Half the text is taken up with the fourteen appendices. The last one deals with the "Future of Our Music and the Music of the Future." One appendix entitled "Chinese Scale Theories" was written by one of Meyer's students, K. C. Hsiao. There are a small number of references and a partial index.—*P. R. Farnsworth* (Stanford).

307. **Mitra, S. C. Politics and psychology.** *Indian J. Psychol.*, 1929, **4**, 89–94.—Each form of government has problems of psychological interest connected with it. Some of these are indicated and briefly discussed.—*F. A. Geldard* (Virginia).

308. **Moser, G. Sterilisierung und Verbrechen.** (Sterilization and crime.) *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, **16**, 340–346.—A newly revised statute makes parole more readily obtainable to those criminals who have submitted to sterilization. There is danger of expecting too much as a result of sterilization. Obviously it will prevent the transmitted perpetuation of hereditary tendencies. It does not, however, promise any great transformation of the personality.—*H. Marshall* (Stanford).

309. **Ortmann, O. The physiological mechanics of piano technique.** New York: Dutton, 1929. Pp. xii + 395. $6.50.—Ortmann is writing a series of three books on piano technique. The first, *Physical Basis of Piano Touch and Tone*, has already been published. The book under discussion is the second of the series. The third will take up the psychological phases of the problem. Part 1 of Ortmann's second book is concerned with the physiological organism. There are chapters on mechanical principles, the skeleton, the muscles, states and properties of muscles, and the neural and circulatory systems. Part 2 is entitled *General Aspects of Physiological Movement*. Here one finds discussions of such topics as geometries of physiological movement, action and reaction, activity and passivity, coordination and incoordination, relaxation, weight-transfer, vertical arm-movement, and lateral arm-movement. Part 3 deals with *The Touch Forms of Piano Technique*. The chapter headings include: arm-legato, tremolo, staccato, finger-stroke, scales, arpeggio, miscellaneous movements, individual differences: general, individual differences: the hand, tone-qualities and style. There are 223 figures and plates, and a bibliography of some 150-odd titles on general anatomy and physiology, muscles, general principles of physiological movement, and physiology of piano technique. According to the author, superstitions are only too common among pianists. Qualitative terms need study to prove that they stand for real entities. Ortmann decides that his study indicates that the recent attempt to get away from the fixed hand-position technique of the older Reinecke school to relaxation and weight-transfer is to a large extent an incorrect move. "No less important is the conclusion that the acquisition of pianistic movements is primarily a psychological process." That is, muscular coordinations apparently change with changes of tempo, intensity and pitch. Ortmann feels that the pedagogy of piano playing must be scientific.—*P. R. Farnsworth* (Stanford).

310. **Owens, A. A. The behavior-problem boy.** *J. Educ. Res.*, 1929, **20**, 166–180.—The behavior-problem boy is defined as one who has been transferred to the disciplinary school for any reason whatever. The study includes boys who attended the disciplinary school in the Philadelphia School System. There were 1373 cases in all divided into the following groups: (1) Cases registered in the school during the year 1926–1927; (2) cases dropped during the same year; and (3) boys dropped from the school register during the years 1920–1922. The author determined the causes for sending the boy to the disciplinary school, court records, physical, intellectual and educational status, social facts, reasons for dismissal from disciplinary school and the post-school careers of these boys. The author finds that there is need for more uniform interpretation of the term delinquency and suggests that it may be advisable to restrict the term to those who have by overt acts been brought into contact with the court. Definitions of the behavior-problem boy are almost entirely lacking. The author suggests the use of the term "behavior problem" to refer to children "who differ from others because of the manifestation of undesirable traits, habits or behavior, whether in the home, school or community, without regard to the presence or absence of a court record." The causes of delinquency and behavior problems are various, the poor home conditions being one of the most important. The picture of the typical behavior problem boy is given in 29 statistical conclusions covering his physical, intellectual, educational and social status. A number of constructive proposals are made which involve increased length of time spent in the disciplinary schools, and modification of the curriculum.—*S. W. Fernberger* (Pennsylvania).

311. **Pew, M. E. Propaganda.** *Teach. Coll. Rec.*, 1929, **31**, 37–43.—Propaganda, i.e., "a partisan, one-sided, self-serving communication to the public, from an irresponsible and concealed source, calculated to influence public thought, either for or against a public cause or policy," is never safe, and is antagonistic to the spirit of free and independent thought.—*J. M. Stalnaker* (Purdue).

312. **Ross, E. A. The conflict of ages.** *Scientia*, 1929, **46**, 346–522.—Men under forty do not as a rule sympathize with men over fifty. Young and old differ in aptitudes and exasperate each other. Usually the conflict is beneath the surface, but sometimes it breaks through. It is more marked in dynamic than in static times. Present day hygiene, established religion, the growth of capital and some types of organization favor the older person; more active organization, new religions, education and democracy favor the young.—*R. G. Sherwood* (Redmond, Washington).

313. **Sageret, J. Les leçons de l'histoire.** (Lessons from history.) *Psychol. et vie*, 1929, 3, 141–144.—Many different conclusions, often quite contrary to one another, can be drawn from the same event, since human action is the result of judgment and opinion rather than of facts. The author advises those interested in history itself, independent of historians' moral and political preachments, to read books that give historical facts without the addition of history "lessons."—*Math. H. Piéron* (Sorbonne).

314. **Saudek, R. Experiments with handwriting.** New York: Morrow, 1929. Pp. lxiii + 408. $5.00.—This book is a presentation of the principles and doctrines of experimental graphology as they are formulated by the author after twenty-six years' research. He is concerned primarily with proving the identity or lack of identity of authorship of different specimens of handwriting, not with local forgeries within a single document. The principles given are applicable to all European languages. His experimental apparatus includes the microscope and the cinematograph. The first point for consideration is the graphological maturity of the writer, i.e., whether he writes naturally with a sentence impulse or whether he is writing with only the stroke, letter, or word impulse of the developing child. These later symptoms are significant in the adult who has reached graphological maturity. The relative speed of the act of writing is basic to a complete analysis. Eight primary and four secondary signs are given for determining the speed of writing. Characterological analysis and methods for detecting authentic and spurious expression, honesty and dishonesty are expounded. The central nervous system is shown to be important in handwriting. The handwriting of a physically mutilated person can be identified with his previous handwriting even though it is now written without the aid of vision, with his other hand, or even with his mouth or toes. Expansive notes and glossary and over 100 facsimiles are appended.—*M. B. Mitchell* (Yale).

315. **Schmidt, F. A nyelvbotlások lélektani elemzése.** (The psychology of verbal slips.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 158–166.—The author conceives of verbal slips as rooted in one of the fundamental neuropsychological laws. The most basic law of mis-speaking is "Ranschburg's phenomenon," or the "homogeneous inhibition," i.e., "similars strive to fuse into a unit in proportion to their degree of similarity." Ranschburg has also proved that this is a basic law accounting for mistakes in writing or typewriting, as well as in reading, etc. The frequency of associations and perseveration are also causes of slips in speaking. From the author's point of view, a knowledge of the psychology of verbal errors gives insight into the secrets of the natural development of language.—*D. E. Johannsen* (Wellesley).

316. **Sharp, F. C. Ethics.** New York: Century, 1929. Pp. 566. $3.50.—This is the first publication in the Century Philosophy Series. Two-thirds of the book is devoted to *The Right* and one-third to *The Good*. The first chapter contains a statement of the problems of ethics. This author quotes many contemporary authors and the book has references in footnotes, in addition to the large bibliographies for each chapter. There are 35 pages of notes.—*K. W. Oberlin* (Harvard).

317. **Swanton, J. R. Social and religious beliefs and usages of the Chickasaw Indians.** *Bur. Amer. Ethnol.*, 1928. Rep. No. 44. Pp. 169–273.—An account, from the literature and the author's own observation, of the social and religious culture of the Chickasaw. The sections of psychological interest include: social organizations, crime, education of children, religious beliefs, and the fate of souls.—*C. M. Louttit* (Hawaii).

318. **Thurnwald, R. Psychische Einwirkungen im Leben und Erleben von Naturvölkern.** (Mental influences in the life and the experiences of primitive races.) *Allg. ärzt. Zsch. f. Psychotherap. u. psych. Hygiene*, 1929, 9, 537–558.—Primitive men are ruled by the many habits and ceremonies of their tribes. Birth, puberty, marriage, sickness, and death play a special rôle. The article describes many specific habits and ceremonies, and also shows that in order to understand the meaning of them we must drop our own conceptions of life and nature and take those of the tribe in question. Witchcraft for instance is not magic art in our sense of the word but is based upon the primitive man's notions of natural laws. The primitive society differs mainly in one point from ours: An individual is usually bound to one group of men in all of his functions, with us to many: the family, social class, occupational group, political party, organizations, etc. But the influence of personality upon society as a whole is as distinct as with us.—*H. M. Bosshard* (Clark).

319. **Veratti, N. Importanza pratica dell' esame psico-antropologico degli imputati.** (Practical importance of a psychological-anthropological examination of defendants.) *Arch. di antrop.*, 1929, 50, 485–495.—To prove the influence of a medico-legal opinion, even in cases in which the symptoms of mental disorder are least obvious in the criminal act, the author reports a case of an employee in the Royal tobacco plant, who, accused of having stolen a package of cigarettes, claimed he had forgotten to put it away. The psychological-anthropological examination revealed that the defendant was suffering from tobacco poisoning, one mental symptom of which is forgetfulness.—*R. E. Schwarz* (New York University).

320. **Wells, G. R. Individuality and social restraint.** New York: Appleton, 1929. Pp. xii + 248. $2.50.—The author of this book attempts to state remedies for the many-sided problem of the interaction of the individual and the group. The chapter headings are as follows: the individual and the group; the stimulus-response mechanism; forms of movement; imagination; emotion and feeling; objects and situations; thinking; the formation of groups; the structure of groups; leaders and leader-

ship; the pressure of the group upon the individual; forms of alleviation of group pressure; motivation; reflective thought, education and self discipline. There are two fundamental laws regulating the formation and persistence of human groups; (1) common stimulating circumstances, which may be physical or mental or both, and (2) intelligent organization with a clear picture of desirable future achievement. These laws are dependent upon such factors as a clear-cut program for future attainment, persecution of one group by another, leadership and common modes of reaction to certain stimuli. The motivating tendencies which are basic to individual behavior are: (1) nutrition; (2) sex, i.e., desire for intercourse, parenthood, friendship; and (3) self-preservation, i.e., defense of physical self, defense of possessions and viewpoints, self expression in and demand for recognition from society, curiosity. Men must be more and more guided by reflective intelligence.—*R. C. Travis* (Western Reserve).

321. **Wile, I. S. The dynamics of marriage.** *Urologic & Cutaneous Rev.*, 1929, **33**, 537–542.—(Courtesy *J. Soc. Hygiene*).

322. **Yoshioka, J. G. A study of bilingualism.** *J. Genet. Psychol.*, 1929, **36**, 473–479.—English and Japanese editions of an intelligence test were given Japanese school children in California being taught in both languages, with results lower than those standardized on unilingual children of each race. It is suggested that bilingualism is a needless hardship where the younger child is concerned.—*J. F. Dashiell* (North Carolina).

323. **Zipf, G. K. Relative frequency as a determinant of phonetic change.** *Harvard Stud. Class. Philol.*, 1929, **40**, 1–95.—The author offers his principle of frequency as an explanation of phonetic change. "The accent, or degree of conspicuousness, of any word, syllable, or sound, is inversely proportionate to the relative frequency of that word, syllable, or sound, among its fellow words, syllables, or sounds, in the stream of spoken language. As usage becomes more frequent, form becomes less accented, or more easily pronounceable, and *vice versa*." This thesis is tested by statistical investigations of the frequencies of linguistic morphemes and phonemes in various languages, ancient and modern, in relation to the phonetic changes which have occurred in these languages. Thus in Indo-European, an originally "free" accent became fixed on the endings in certain inflectional forms, but on the stem in others; the statistical counts show that the endings on which the accent became fixed were of much less frequent occurrence than the others. As regards the distinctive sounds making up the phonetic pattern of a language, it is suggested that each such sound has an upper limit of frequency of occurrence; if, e.g., due to such causes as changes in the currency of various classes of concepts, with the resulting shifts in vocabulary, the frequency of a sound comes to exceed this upper limit, it will tend to become less critical a factor in the speaker-hearer relationship; it will then tend to be phonetically "weakened" to a phonetically and acoustically less conspicuous form. On the other hand, if the frequency of a sound falls below a certain lower limit, it becomes phonetically and acoustically more critical; it tends then to be phonetically "strengthened" into a more conspicuous form. These upper and lower limits are values which depend upon the inherent conspicuousness of a given sound for speaker and hearer, but they appear to be remarkably constant for given sounds for many languages of the Indo-European family, and to be similar even in the non-Indo-European Hungarian.—*E. A. Esper* (Washington).

[See also abstracts 94, 200, 233, 253, 254, 257, 261, 265, 276, 342, 372, 388, 410.]

INDUSTRIAL AND PERSONNEL PROBLEMS

324. **[Anon.] Industrial Health Research Board. Ninth annual report (1928).** London: H. M. Stationery Office, 1929. Pp. 23.—This is a report issued by the body formerly known as the Industrial Fatigue Research Board, which has changed its title in order more adequately to connote its present activities. The report gives a brief account of the investigations and researches which are being carried out under the supervision of its officers. These activities for convenience are divided into three categories. The first of these concerns investigations of particular problems of wide industrial importance, and covers work on such problems as hours of work, physiology of heating and ventilation, effects of noise and vibration, sickness records, vocational guidance, etc. The second group consists of specific problems submitted by government departments and industrial associations. In this category come investigations into sickness among printers and card-room operatives, the causes of absenteeism among miners, air humidity in mines, vocational selection for government departments, etc. The third group, to which belong all experimental researches conducted in universities and other laboratories, is concerned with studies of the principles governing muscular exercises, transfer of acquired skill, and relation of age to the acquisition of dexterity and so on. A brief notice describing the type of work done by the investigators concerned is appended in the case of each problem noted.—*M. D. Smith* (Cambridge, England).

325. **[Anon.] Leerling opleiding bij de N. V. Grusonwerk (Fried. Krupp) te Magdeburg.** (Education of apprentices at the N. V. Grusonwerk (Fried. Krupp) in Magdeburg.) *Jeugd en Beroep*, 1929, 2, 308–312.—The aim of this system is (1) to prepare such mechanics as will meet the demand of the trade, (2) to train them well in an economically permissible time, (3) to educate them in independent thought, (4) to teach them the method and purpose of construction, (5) to educate them in character, and (6) to inspire them with pride and joy in their work. Program and method are described in detail.—*H. Hospers* (Western Theological Seminary).

326. **Berling, G. Anlernung von Werkstattsfunktionen.** (Training in work-shop activities.) *Indus. Psychotechn.*, 1928, **5**, 228–246.—An analysis of skill is first suggested, followed by a brief statement of desirable procedures for industrial training. Detailed studies of training in filing, hammering and measuring are described. Follow-up performance tests showed the specially trained apprentices to be distinctly superior to the other apprentices in the given operations.—*A. W. Kornhauser* (Chicago).

327. **Bolt, R. Eignungsprüfung und planmässiges Anlernen von Glasbläserinnen für die Herstellung von Elektrolytzählern in den Siemens-Schuckertwerken, Nürnberg.** (Aptitude tests and systematic training of women glass-blowers for the production of electrolyte counters in the Siemens-Schuckert works, Nuremberg.) *Indus. Psychotechn.*, 1928, **5**, 249–263; 296–307.—A series of physiological tests, tests for general work abilities, and special tests closely related to the work to be performed, were used in selecting women to be trained as glass-blowers. Ratings of personality traits were also obtained. The training methods are described as well as the carefully planned guiding principles. A training report was given for each worker, based on systematic measures of performance and on ratings of personal qualities during training. As a result of the training program output has increased enormously. The needs and possibilities of follow-up work in the interests of individual adjustments are discussed.—*A. W. Kornhauser* (Chicago).

328. **Couvé, R. Bestgestaltung der Verwaltung: Leistungsuntersuchungen im Eisenbahnverkehrsdienst.** (The best organization of management: efficiency investigations in the railroad transportation service.) *Indus. Psychotechn.*, 1928, **5**, 193–207.—The author describes the methods employed in analyzing jobs in railroad traffic departments and in making detailed time-studies. A number of sample forms are reproduced.—*A. W. Kornhauser* (Chicago).

329. **Couvé, R. Die Gleichmässigkeit psychotechnischer Prüfungsergebnisse.** (The uniformity of psychotechnical test results.) *Indus. Psychotechn.*, 1928, **5**, 312.—Test results from the German railways show that norms can be safely based on 200 or 300 cases.—*A. W. Kornhauser* (Chicago).

330. **Couvé, R. Zur Organisation der Durchführung psychotechnischer Eignungsuntersuchungen in einem Grossbetrieb mit dezentralisierten Prüfstellen.** (The organization of procedures for psychotechnical aptitude testing in a large firm with decentralized testing places.) *Indus. Psychotechn.*, 1929, **6**, 47–53.—The author points out, with concrete illustrative material, the elements in a standardized administrative procedure for testing groups of workers.—*A. W. Kornhauser* (Chicago).

331. **De Man, H. Joy in work.** (Trans. by E. and C. Paul.) New York: Holt, 1929. Pp. 224. $2.00.—Joy in work results from the satisfaction of the "primary motives," i.e., the instincts of activity, play, construction, curiosity, self-assertion, and possession, and from the "accessory motives," i.e., herd instinct, love of mastery, esthetic gratification, freedom from the feeling that the work is necessary for sustenance, and the feeling that the work has social utility. Joy in work is diminished by monotony, fatigue, unfavorable technical conditions, poor working conditions, insecurity, and a low status accorded to one's work. Case material is given.—*W. C. Poole* (Worcester, Mass.).

332. **Dilger, J. Zur Wirkungsgradbestimmung von Eignungsprüfungen aller Art.** (The determination of efficiency on aptitude tests of all kinds.) *Indus. Psychotechn.*, 1929, **6**, 53–56.—Analysis of an artificial frequency curve and its integral curve is made the basis for conclusions concerning: (1) the collective efficiency of any given part of the group tested and (2) the number of persons who must be tested in order that a group having a given percentage efficiency can be selected.—*A. W. Kornhauser* (Chicago).

333. **Engelmann, W. Zur Psychologie des "ersten Blickes." Intelligenz und Tauglichkeitsschätzung an Buchdruckerlehrlingen.** (The psychology of "the first impression." Estimation of the intelligence and fitness of printer apprentices.) *Indus. Psychotechn.*, 1928, **5**, 307–310.—On the basis of a 30-second interview, the interviewer gave estimates (qualitative) of each apprentice's intelligence, fitness for the work, speed of work, and general favorableness of impression. These estimates were checked against the results from a long series of aptitude tests. Of the 20 cases reported 11 showed good agreement, 7 fair, 2 poor.—*A. W. Kornhauser* (Chicago).

334. **Farmer, E., & Chambers, E. C. A study of personal qualities in accident proneness and proficiency.** *Indus. Health Res. Board*, 1929, Rep. No. 55. Pp. 80.—This is an account of an investigation of accident causation from its personal rather than from its mechanical aspect. The work is a direct continuation of an investigation carried out in 1926 by the same workers, and it was planned in order to retest the earlier conclusions and to examine more closely certain special problems arising out of these. The report is divided into three main parts. Part I consists of a description of the tests used and the groups tested. In Part II considerations are advanced as to the nature of the intercorrelations and the light it throws upon the interaction of psychological function. Part III contains an account of the practical testing of these theoretical conclusions by the application of them to the objective criteria of industrial proficiency and accident rate. A few of the general conclusions drawn from the work as a whole are: (1) The same reasons account for the smallness of the intercorrelation coefficients in part II, and for the small correlations between the tests and the objective criteria and industrial proficiency and accident rate in Part III. (2) The small correlations between the tests and the objective criteria indicate that industrial proficiency and accident

proneness are dependent on many dominant factors and not upon one predominant factor. (3) Tests even when weighted fail to give correlations of sufficient magnitude to make valid the assumption that they measure more than a portion of the factors, still less the most important factors involved in the objective criteria. (4) Though the investigation has not reached the final stage, it would appear that, even at the present stage, the use of certain of the tests described together with the existing examination would result in the selection of entrants "more capable of benefiting by instruction and less liable to accidents." Some incidental points of interest arising out of the investigation are given in a series of 14 appendices.—*M. D. Smith* (Cambridge, England).

335. **Goldstern, H. Zur Psychotechnik des Messens.** (The psychotechnics of measurement.) *Indus. Psychotechn.*, 1928, **5**, 207–228.—The author discusses briefly the problem of the personal equation in measurement and gives a short historic résumé. The present investigation deals with the problem of eye fatigue in the use of the polarimeter. The experiments show a periodic sequence of fatigue and recovery without any general increase in fatigue effects with continuation of the work. Rest pauses produced no improvement in the polarimeter observations. Bibliography of 93 titles.—*A. W. Kornhauser* (Chicago).

336. **Goldstern, N. Zur Psychotechnik des Messens.** (The psychotechnics of measurement.) *Indus. Psychotechn.*, 1928, **5**, 281–296.—The aim of the investigations here reported was to find what influences affect polarimeter readings and to improve the polarimetric work. The research carries further the studies previously reported (III: 335). The influence of visual adaptation was first demonstrated. Other inquiries dealt with the time per reading, the influence of lighting intensity, variability in brightness discriminations among individuals and for different numbers of readings. Recommendations are made concerning favorable conditions for practical work with the polarimeter.—*A. W. Kornhauser* (Chicago).

337. **Heilandt, A. Eignungsprüfung für anzulernende Arbeiter und Arbeiterinnen in den AEG-Fabriken.** (Aptitude testing of men and women workers to be trained in the AEG (General Electric Co.) works.) *Indus. Psychotechn.*, 1929, **6**, 1–10.—The procedure used in selecting applicants for semi-skilled work in electrical shops is described. The author indicates the nature of the tests employed and the abilities required. Preliminary follow-up studies show favorable results.—*A. W. Kornhauser* (Chicago).

338. **Heydt, C. Die Entwicklung der psychotechnischen Versuchsstelle der Reichsbahndirektion Berlin.** (Development of the psychotechnical laboratory of the governmental railways in Berlin.) *Indus. Psychotechn.*, 1928, **5**, 272–277.—The author describes the rapid development of the testing, training and efficiency work for the railroads and sketches the present range and effectiveness of the work.—*A. W. Kornhauser* (Chicago).

339. **Knoop, W. Material- und Uebungseinflüsse beim Drahtbiegen.** (The influence of materials and practice in wire bending.) *Indus. Psychotechn.*, 1929, **6**, 57–64.—Results on a test in which subjects have to bend wire into given forms showed marked differences when different kinds of wire were used. A considerable practice effect also appeared. Many correlation coefficients are reported and interpreted —dealing with relationships of speed and quality, earlier and later trials, results with different kinds of wire, quality ratings of one's work by self and by others, etc. A single test is satisfactory for practical purposes. Follow-up results are favorable.—*A. W. Kornhauser* (Chicago).

340. **Koblanck, H. Betriebs-Erfahrungen zur Frage der Anlernung.** (Management experiences bearing on the question of training.) *Indus. Psychotechn.*, 1929, **6**, 21–25.—The author stresses the importance of working out careful training methods along with selection procedures. A number of suggestions are given concerning aims and methods in training.—*A. W. Kornhauser* (Chicago).

341. **Kolodnaja, A. Beiträge zur Berufsanalyse des Lokomotivführerberufes.** (Contributions to the occupational analysis of the work of the locomotive engineer.) *Indus. Psychotechn.*, 1928, **5**, 277–280.—*A. W. Kornhauser* (Chicago).

342. **Kügelgen, G. V. Graphologie und Berufseignung.** (Graphology and vocational fitness.) *Indus. Psychotechn.*, 1928, **5**, 311.—Character traits of 48 apprentices were judged from their handwriting. A scale of 1 to 5 was used. The ratings were compared with test scores for intelligence and dexterity (also reduced to a 5-interval scale.) Complete agreement was found in 66% of the cases; in 21% the discrepancy was one interval; in 13% it was two intervals.—*A. W. Kornhauser* (Chicago).

343. **Kurtig, K. Wo und wie wirkt der Werbefilm?** (Where and how is the advertising film effective?) *Indus. Psychotechn.*, 1928, **5**, 367–369.—*A. W. Kornhauser* (Chicago).

344. **Laue, K. Sammelbericht über die Studien zur "fliessenden Fertigung" und Arbeitsbindung.** (Collective report concerning studies of continuous flow of work and the coordination of work.) *Indus. Psychotechn.*, 1929, **6**, 66–75.—The writer briefly summarizes the material from 11 books and 38 articles dealing with modern continuous-flow industrial production. Considerable emphasis is placed on the adaptation of workers to the work and of the work to the workers.—*A. W. Kornhauser* (Chicago).

345. **Lossagk, H. Arbeitsauffassung der Arbeiter im Urteil der Meister.** (The workers' attitude toward work as judged by supervisors.) *Indus. Psychotechn.*, 1928, **5**, 183–189.—The investigator questioned foremen and managers, who themselves had been workers and who were personally known, concerning the feelings of workers toward their work, especially routine mechanized work. The responses place great emphasis on the importance of wages, and picture skilled workers as on the whole well satisfied,

whereas a great number of unskilled are restless and uninterested. Varied reactions to automatic work, change of task, group versus individual wage plans, etc., are reported.—*A. W. Kornhauser* (Chicago).

346. **Moede, W. Eignungsprüfung für Buchdrucker.** (Aptitude examination for printers.) *Indus. Psychotechn.*, 1928, **5**, 343.—*A. W. Kornhauser* (Chicago).

347. **Moede, W. Richtungen und Entwicklungsstufen der industriellen Anlernung und Schulung.** (Aims and developmental steps in industrial training and education.) *Indus. Psychotechn.*, 1929, **6**, 11–21.—Industrial training has developed from unregulated make-shift methods to procedures of general leadership and development of men. The author discusses certain principles that should guide training methods.—*A. W. Kornhauser* (Chicago).

348. **Müller, A. Psychotherapie im Betrieb. Betriebspfleger und Organisator.** (Psychotherapy in industry. Advisors in industry and managers.) *Allg. ärzt. Zsch. f. Psychotherap. u. psych. Hygiene*, 1929, **9**, 558–561.—The manager of industry organizes his employees from a business point of view. In every factory there are tensions of the mind which lead to material loss. The psychological advisor is able to adjust them.—*H. M. Bosshard* (Clark).

349. **Müller, F. Zur Psychologie des Verkäufers.** (The psychology of the salesman.) *Indus. Psychotechn.*, 1928, **5**, 363–367.—The writer presents an analysis of certain abilities required in selling and suggests a series of tests. A preliminary study gave a correlation of .65 between the test scores and ratings of selling ability in one store. The tests include an Ebbinghaus completion test, a distraction test (questions asked while S is computing), tests of immediate memory, etc.—*A. W. Kornhauser* (Chicago).

350. **Radecki, W. O estado actual da psychotechnica e meios practicos de applica-la.** (On the present status of psychotechnics and practical means of its application.) *Ann. da Colon. de Psychopath.*, 1928, **1**, 307–321.—*J. W. Nagge* (Chicago).

351. **Ruffer, W. Schema einer Fähigkeitsanalyse für kaufmännische Büroangestellte in der Verwaltung eines Grossbetriebes.** (Plan for an efficiency analysis of commercial office employees in the management of a large business.) *Indus. Psychotechn.*, 1928, **5**, 345–358.—The author presents the results of a research study of about 700 employees in one company. The employees held about 100 jobs, involving 19 separate and distinguishable functions. The purpose was to determine the efficiency of the individual workers and to devise methods for testing employees and applicants in regard to the particular qualities required for their work. The article gives in considerable detail the results of an analysis of the jobs held by the 700 subjects of the study. Each of the 19 groups into which the jobs were classified was analyzed as to (1) the duties involved; (2) the qualities required; (3) the types of employees best fitted for the work; (4) the knowledge and experience needed.—(Courtesy *Social Science Abstracts*).

352. **Schipper, J. De opleiding van leerlingen in de boekdrukkerij. I.** (The education of apprentices in bookprinting. I.) *Jeugd en Beroep*, 1929, **2**, 264–267.—This article explains the organization of the Central District Committee concerned with the education of apprentices in bookprinting. Their duties are (1) to exercise care that a contract is executed with all apprentices who receive an education, (2) to control the education in connection with the annual investigation, and see that both employer and apprentice fulfil all obligations, and (3) to organize the final examinations which the apprentice is required to take. Each of these points is explained in detail.—*H. Hospers* (Western Theological Seminary).

353. **Schipper, J. De opleiding van leerlingen in de boekdrukkerij. III.** (Education of apprentices in bookprinting. III.) *Jeugd en Beroep*, 1929, **2**, 292–294.—Great progress in developing better workmen has been made through education in the trades. In order to continue this work, the Association for the Advancement of Education in the Trades in Typography was formed in 1925. This organization received the approval of the government in February, 1929, and there is now hope that the government will subsidize this branch of industrial education, as the minister of education has expressed his approval of the project.—*H. Hospers* (Western Theological Seminary).

354. **Schorn, M. Der V. Internationale Kongress für Psychotechnik in Utrecht.** (The fifth international congress of psychotechnology in Utrecht.) *Indus. Psychotechn.*, 1928, **5**, 341–343.—*A. W. Kornhauser* (Chicago).

355. **Schuschakow, A. P., & Afanasjew, M. K. Untersuchung der Aufmerksamkeits-Ermüdung bei Eisenbahnbediensteten der Station Swerdlowsk im Dezember 1928 nach der Differenzmethode.** (Investigation of fatigue of attention among railroad employees of the Sverdlovsk station in December, 1928, by means of the difference method.) *Indus. Psychotechn.*, 1929, **6**, 64–65.—Four station employees were tested before and after work for several days and several nights. The tests used were simple arithmetic calculations, cancellation, and number checking. A decrease in attention occurred in 72% of the before-after comparisons; the decrease averaged about 20%.—*A. W. Kornhauser* (Chicago).

356. **Thompson, L. A., Jr. Measuring susceptibility to monotony.** *Person. J.*, 1929, **8**, 172–196.—This study is an experimental approach to the increasingly important question of how to measure or to predict susceptibility to monotony. The first part is a review of the literature with a critical statement of the problem; the second reports an experimental attack on the subject. The method of approach consisted in having the subjects do four different types of work, each divided into a uniform phase and a varied phase. Records of both production and errors were kept for each phase of the work. The records were finally expressed in terms of decrement for

each phase of each kind of work. This was done by dividing production for the first half of the work period by the corresponding figure for the second half. The per cent decrement for the varied phase was then subtracted from the per cent decrement for the uniform phase. This gave a single score which expressed the relative susceptibility to monotony of the subject for each type of work. A similar treatment was given the error record. Other data were gathered from personal history blanks and rating scales which were filled out by each subject. Each individual was then rated independently by two trained raters. These data when combined yielded information which was weighted and combined into a criterion of susceptibility to monotony. It was found that a battery of four out of the twelve tests when optimally weighted gave a correlation of .71 with the criterion. Susceptibility to monotony is but little influenced by intelligence status.—(Courtesy *Person J.*).

357. **Tümena, H. W. Die verkaufspsychologische Ausbildung des Verkäufers in der Praxis.** (The practical training of the salesman in the psychology of selling.) *Indus. Psychotechn.*, 1928, 5, 358–362.—*A. W. Kornhauser* (Chicago).

358. **Van Det, E. J. Roeping, beroep, broodwinning. I.** (Calling, vocation, livelihood. I.) *Jeugd en Beroep*, 1929, 2, 289–291.—The interrelationship of calling, vocation, and livelihood is discussed. Calling has first place, since it includes vocations which have as their object the direct service of man to man. Calling and vocation may exist simultaneously alongside and outside each other, but the ideal is the fusion of vocation and calling. When livelihood becomes vocation, and vocation calling, the ideal has been attained.—*H. Hospers* (Western Theological Seminary).

359. **Von Foerster, J. F. Zweckmässige Sitze und Tische.** (Appropriate seats and tables.) *Indus. Psychotechn.*, 1929, 6, 75–77.—*A. W. Kornhauser* (Chicago).

360. **Wyatt, S. Boredom in industry.** *Person. J.*, 1929, 8, 161–171.—This paper summarizes the results of experimental enquiries into the nature and causes of boredom and suggests remedies for it in the case of factory machine operators engaged in repetitive work. Individual differences determine in large measure the degree of boredom experienced. The existence of noted variations in intelligence, temperamental tendencies, and ability to mechanize a task provides important problems for future research. Not all workers are subject to boredom but after two hours at the same task most operators become restless and continue work with effort or reduced efficiency. Boredom is experienced less in the afternoon than in the morning. The mechanisms underlying boredom appear to be illuminated by a temporal illusion noted in bored workers: time elapsed is overestimated. The nature of the task contributes to boredom: operations involving attention and adjustment in response to varied situations are in general less boring than those requiring only intermittent or partial attention: while tasks so automatized as to permit uninterrupted mind wandering seem to produce—in workers temperamentally suited to repetitive work—a minimum of boredom, —which suggests a means for its avoidance. Keeping pace with a rhythmically operating machine; teaching the operator the importance of the work he is doing; supplying material in small lots rather than in an endless flow along a belt; improving working conditions, both for the prevention of unpleasant day-dreams about the job and for the development of pride in the organization and satisfaction in the job are all indicated remedies for the dissipation of boredom. Facilities for developing a richer life outside the factory will be provided by employers interested in the development of the worker as a citizen.—(Courtesy *Person. J.*).

361. **Wyatt, S., Fraser, J. A., & Stock, G. G. L. The effects of monotony in work. A preliminary inquiry.** *Indus. Health Res. Board*, 1929, Rep. No. 56. Pp. 47.—This report embodies an account of the first attempt made to study the prevalence and nature of boredom in operatives working under normal factory conditions instead of under controlled laboratory conditions. From the curves of output obtained from operatives engaged in different repetitive occupations, together with subjective impressions of these operatives, are drawn certain inferences as to the incidence and symptoms of boredom. The following are some of the conclusions which emerged: (1) Susceptibility to boredom differs in the individual from the entirely immune to those to whom monotonous work is always distasteful. At the same time adaptation is important in determining the ultimate attitude of the worker towards the conditions of his work. (2) The amount of boredom bears some relation to the degree of mechanization of the task. A condition most favorable to the development of boredom is supplied by semi-automatic processes. It is less liable to occur (a) when the work is entirely automatic, (b) when the attention is entirely concentrated on the task. (3) The conditions under which work is done, such as payment according to output, introduction of suitable rest-pauses, working in social groups, seem to have a considerable influence in eliminating or reducing boredom.—*M. D. Smith* (Cambridge, England).

[See also abstracts 76, 127, 199, 430, 432, 452.]

CHILDHOOD AND ADOLESCENCE

362. **Adams, O. Why get together in groups?** *Childhood Educ.*, 1928, 5, 127–133.—This report of an enterprise undertaken by a kindergarten group, consisting of the construction and operation of a miniature city, shows how the situation developed desirable social-behavior habits, such as respect for the rights and ability of others, willingness to share and cooperate, and a sense of individual responsibility to the group.—*M. P. Montgomery* (Faribault, Minn.).

363. **[Anon.] The mental activity of allergic children.** *J. Amer. Med. Asso.*, 1929, 93, 923.—Chil-

dren who suffer from allergic conditions (hay fever, asthma, urticaria, etc.), are above the average in general health and in intelligence.—*G. J. Rich* (Boston Psychopathic Hospital).

364. **[Anon.] II. De wittelijke bepalingen in zake de "Jugendwohlfahrt."** (Laws governing the "Jugendwohlfahrt.") *Jeugd en Beroep*, 1929, **2**, 275–286.—The article explains the term "Jugendwohlfahrt" as including both the protection and the care of youth. The laws are itemized under the following heads: (1) brief content of the organization, (2) youth welfare jurisdiction, (3) protection of orphans, (4) cooperation in guardianships, (5) protective oversight, (6) employment and education, (7) juvenile court help, (8) care of invalids.—*H. Hospers* (Western Theological Seminary).

365. **Baldwin, B. T., Busby, L. M., & Garside, H. V. Anatomic growth of children: a study of some bones of the hand, wrist, and lower forearm by means of roentgenograms.** *Univ. Iowa Service Bull.*, 1929, **13**, No. 35. Pp. 4.—An announcement of a monograph by the above title to be published as a University of Iowa Study in Child Welfare. The bulletin stresses particularly the methods used in the study. More than 1300 roentgenograms of the hands and wrists of children from birth to seventeen years of age were studied in regard to time and order of appearance and rate of development of the bones of the wrist, the epiphyses of the long bones of the lower forearm and hand, and the sesamoid bones of the hand.—*B. L. Wellman* (Iowa).

366. **Blonsky, P. Das Problem der ersten Kindheitserinnerung und seine Bedeutung.** (The problem of earliest childhood memories and their significance.) *Arch. f. d. ges. Psychol.*, 1929, **71**, 369–390.—Earlier studies have concerned themselves chiefly with dates of earliest recalls and the content of the recall. More recent students, Freud and others, looked for material to throw light on adult personality traits. Blonsky uses early memories to throw light on the memory process itself. He collected several hundred early memories from adults and from children 11 to 12 years of age. He takes issue with the psychoanalytic school in looking upon these recalls as repressions of annoying experiences. His findings reveal that the factors in experiences that make for deepest impressions are the fear-inspiring, the pain-invoking, and the puzzling circumstance. Back of these he sees the self-protective impulse. Earliest memories are associated with the labyrinth sense, having greatest permanency. Later antipathies and phobias often have their inception here. Second in importance as a cause for permanency is the sense of pain, dislike for the source of pain often lingering late into life. He disagrees with Freud that early memories have sex significance. Deep emotional experiences are not necessarily cause for recall; rather, certain emotions that have to do with personal safety.—*A. B. Herrig* (Central State Teachers College).

367. **Branham, V. C. An analysis of 1671 cases brought to the child guidance clinics of the New York State Department of Mental Hygiene.** *Psychiat. Quar.*, 1929, **3**, 569–589.—The period covered by the report is three years. The picture presented is fairly complete as a state-wide survey since children under 16 years of age were examined in 125 towns distributed throughout the counties of the state. Statistical data showing (1) possible hereditary factors; (2) the home situation; (3) the early developmental period of the children examined, are presented in the form of a series of tables. The metropolitan group is compared with the up-state rural group and the main features brought out by the analysis, are noted.—*E. T. Burr* (Vocational Adjustment Bureau).

368. **Didier, J. Les enfants nerveux.** (Nervous children.) *Psychol. et vie*, 1929, **3**, 185–188.—A nervous person is one unadapted to life, since he lacks that harmony between consciousness and unconsciousness which is possessed by mentally sound subjects. However, he need not necessarily suffer defeat in life, a fact that must be made clear to every nervous child in order to efface his fundamental feelings of inferiority.—*Math. H. Piéron* (Sorbonne).

369. **Gauger, M. E. The modifiability of response to taste stimuli in the preschool child.** *Teach. Coll. Contrib. Educ.*, 1929, No. 348. Pp. viii + 53.—A group of twenty children varying in age from eighteen months to three years served as subjects in this experiment. The taste stimuli used were chocolate, salt, vinegar, and egg white. The results were treated statistically to determine reliability and validity of the results. Both were found to be fairly satisfactory. A review of the literature, criticism of the experiment, applications of results, suggestions for future experiments, and a bibliography of thirty titles are given. Salient conclusions are: (1) that the responses of the preschool child to taste stimuli are modifiable; (2) that modifiability seems to be caused by "simple 'connection-forming' learning, probably without ideas"; (3) that "responses to unpleasant or annoying stimuli (and probably foods) can be modified in a learning situation to responses of indifference or even pleasantness."—*H. H. Remmers* (Purdue).

370. **Hamill, R. C. Enuresis.** *J. Amer. Med. Asso.*, 1929, **93**, 254–257.—Enuresis is to be considered primarily as a conduct disorder. The sleeping adult can make himself responsible for a certain type of conduct. The sleeping child apparently remains asleep under conditions in which an adult would certainly waken, but the observer may get the impression that this sleep is being voluntarily maintained by the child. The mass of sensory stimuli incident to the act of micturition and lying in a wet bed are greater than the stimuli ordinarily required to waken a person. It is of prime importance that the child should be made to assume responsibility for its conduct in sleep. All other forms of treatment are against the child's interest, as they engender the idea of lack of responsibility. This assumption of responsibility depends on a number of factors, some of which may be beyond the physician's control.

Some, however, depend on the entente established between physician and child.—*G. J. Rich* (Boston Psychopathic Hospital).

371. **Havens, R. M., & Andrus, R. Desirable literature for children of kindergarten age.** *J. Genet. Psychol.*, 1929, **36**, 390–414.—Literature selected from approved kindergarten lists was read to children in a group, and their responses rated on a scale from 0 to 3, in respect to 12 such characteristics as imaginative appeal, ethical soundness, humor, etc. Each piece of literature was given corresponding scores; and on the basis of the results a recommended list is furnished. Effects were noticeable on the children's vocabularies, attentiveness, willingness to participate in discussion, etc. Many tables.—*J. F. Dashiell* (North Carolina).

372. **Heinlein, C. P. A new method of studying the rhythmic responses of children together with an evaluation of the method of simple observation.** *J. Genet. Psychol.*, 1929, **36**, 205–228.—Observers, both musical and unmusical, fall into illusions when attempting to diagnose the characteristics of a child's marching responses to musical rhythms. They are due to a tendency to project a focal or dominant configuration in one sense modality (visual or auditory) upon the observations in the other modality (auditory or visual). To eliminate this type of error, (1) a platform was devised bearing metal strips serving as alternating poles of an electric circuit, which would be closed each time a foot bearing a brass stirrup is set down; (2) a Duo-Art piano was used with one key (its hammer being silenced) made to operate a contact lever at quarter-note intervals, through special perforation in the music roll; and (3) records of foot contacts and of key movements were made electrically upon a continuous kymograph.—*J. F. Dashiell* (North Carolina).

373. **Hertzberg, O. E. The relationship of motor ability to the intelligence of kindergarten children.** *J. Educ. Psychol.*, 1929, **20**, 507–519.—46 kindergarten children were given the Stanford Revision and 18 tests of motor ability. Three trials were given each of the tests of motor ability and the best score of the three was used as a measure of the ability. Motor ability alone does not correlate in any practically significant degree with mental age. The coefficients, though low, are positive. "By the time of the kindergarten period qualities of abstract intelligence, such as concentration, discrimination, etc., are more important than motor development in indicating the mental maturity of the child." The author suggests, however, that a battery of tests involving motor tasks, with elements requiring abstract abilities added, might be constructed to measure the intelligence of kindergarten children.—*J. A. McGeoch* (Arkansas).

374. **Johnson, B. The three-year-old at school.** *Childhood Educ.*, 1928, **5**, 57–60.—The Child Institute of Johns Hopkins undertakes to supply for the child elements which may be lacking in his home environment. These include, besides provision for his physical needs: bodily activity with development of agility and initiative; rhythmic musical exercises to promote grace and freedom from self-consciousness; emotional control through exercise of the emotions; opportunity and material for creative expression. The supervision of such a group requires, besides a knowledge of psychology, ability to adapt the program to individuals.—*M. P. Montgomery* (Faribault, Minn.).

375. **Kilpatrick, W. H. Behavior problems.** *Childhood Educ.*, 1928, **5**, 119–126.—A statement of some general ideas applicable to behavior problems, including: the inefficacy and danger of punishment; the fact that people are not motivated solely by hope of reward or fear of punishment; the necessity of respect for child personality; the integration of morals and religion with life; the obligation and the assumption of personal responsibility. A behavior problem is a failure of the organism to restore equilibrium. "We need a psychology correlatively able to fit the required philosophy and adequate to express the biological conception of equilibrium." Many problems arise from failure to recognize the need of creative thinking and work. Teachers should be trained to recognize symptoms of maladjustment. A large school should have an expert, and a small school at least a visiting teacher to handle special problems.—*M. P. Montgomery* (Faribault, Minn.).

376. **Luria, A. R. [Experimental psychology and the development of the child.]** *Nauchnoye Slovo*, 1929, **3**, 77–97.—On the basis of a series of experiments it is concluded that the child's perception of form evolves from a diffuse stage, through a naïve configurational to a complex taking account of both whole and part. When given candy upon picking some cube out of a square made up of 16 cubes and a 17th placed outside, children, 1½–2 years of age, picked at random, while those of 2½–3 years invariably picked at the outside cube. When a cross was made up of 11 cubes and the children were told to count the cubes, 2–3-year-olds skipped in all directions, 4–5-year-olds counted first one array and then the other, but 62.5% of them counted the middle cube twice, while only 6.2% of 8–9-year-olds committed that error. In another series of experiments in which children, 4–6 years of age, had been required to divide a number of cubes among themselves, 3 stages of development were observed. In the first stage, the child makes no effort at any planful or equal division, merely giving each a part of the cubes. In the second stage, figures are first made up of the cubes and each child is given a figure. In the third stage, each share is definitely equalized by arranging the cubes in columns and seeing that the columns are equal. The development of writing in a 5-year-old girl has also been carefully checked up.—*H. S. Razran* (Columbia).

377. **Morgan, J. J. B. Developing adult emotions.** *Rel. Educ.*, 1929, **24**, 761–770.—The claim to happiness is the child's first right. Emotional adjustment is essential to this end. To accomplish this a child should attain normal development as an individual and have the satisfaction of having achieved some-

thing. These contribute to social adjustment and normal growth.—*J. P. Hylan* (Stoneham, Mass.).

378. **Muni, J. J. Intereses del niño por la escuela.** (The interest of the child in school.) *Rev. de ped.*, 1929, **8**, 393–397.—Over 4400 school children of a Spanish province were asked why they did not like to go to school. Some of the most frequent replies to the query were: "because the school is ugly," "because the teacher scolds and punishes," "because the school is unattractive," "because we cannot play," "because the school is far from home," etc. While the author appreciates the effects of rationalization and ignorance upon the replies he maintains that the answers are of some value in the formulation of a much needed reform in the old school program.—*J. W. Nagge* (Chicago).

379. **Radecki, W. A criação de habitos sadios nas crianças.** (On the establishment of health habits in children.) *Ann. da Colon. de Psychopath.*, 1928, 1, 297–305.—*J. W. Nagge* (Chicago).

380. **Révész, M. A gyermekorvosok psychologiai kiképzésének kérdése.** (The psychological education of child specialists.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 321–324.—The author feels that the psychological training of child specialists is inadequate, especially since the psychological factors are frequently more important than the physical ones. She feels that woman's unique pedagogical capacity especially fits the feminine doctor for this type of work.—*D. E. Johannsen* (Wellesley).

381. **Rossolimo, G. L'individualité de l'enfant.** (The child's individuality.) (Trans. by V. Kovarsky.) Paris: Alcan, 1929. Pp. 64. 12 fr.—This work is an investigation project designed to be of use to teachers, doctors, and parents in determining the characteristics of normal and defective children. The questionnaire is formed in such a manner that the investigator has only to write the responses or the results obtained opposite the indicated questions. It appears to exhaust all the questions to which a response seems desirable, serving equally well the psychological and the medical points of view. It covers, first, the family of the child, his antecedents, and his heredity, and second, the child's personal characteristics, such as his feelings of various kinds, his disposition, emotivity, inclinations and leanings, his various psychological qualities, his habitual attitude, gestures, carriage, his manner of speaking, the things that he notices, etc. As a result, the investigator is able to arrive at a conclusion determining the general character of the child's individuality. This is done by means of two operations: first, the operator draws certain particular conclusions relative to each of the groups of questions, and, then, as a result of these deductions, he arrives at a general conclusion embracing all sides of the child's character. —*Math. H. Piéron* (Sorbonne).

382. **Smith, C. W. Growth in height of feeble-minded children.** *J. Genet. Psychol.*, 1929, **36**, 330–341.—Tables and graphs are presented, based upon measurements extending over 6 years of a projected 10 taken upon children of all grades of amentia. Although the age groups overlap considerably, rate of growth is regular and predictable. Feeble-minded boys grow more slowly but attain their limit of growth earlier than do normal ones.—*J. F. Dashiell* (North Carolina).

383. **Stern, W. La crise de l'adolescence.** (The adolescence crisis.) *Pour l'ere nouvelle*, 1929, **8**, 112–115.—A résumé of three lectures on adolescence psychology given at The Hague.—*Math. H. Piéron* (Sorbonne).

384. **Thomas, D. S., & others. Some new techniques for studying social behavior.** (Child Development Monog., 1929, No. 1.) New York: Columbia University Press, 1929. Pp. 213. $2.00.—The purpose of the studies described is to set forth the development of a method by which the social and to a certain extent the emotional responses of the child may be objectively recorded and analyzed. Dorothy Swaine Thomas, under whose direction the method was developed and the studies were made, describes in the first chapter *The Methodology of Experimental Sociology*. She reviews the available data in regard to social behavior and concludes that a new methodology for taking observations and for testing their reliability is necessary. The choice of units of behavior chosen as data and the techniques developed are described. The three general forms discussed in the body of the monograph are: (1) those in which each child is followed for a given period in the nursery school and a given overt social behavior act recorded each time it occurs; (2) those in which within the larger nursery school situation a specific social situation is recorded each time it recurs; (3) those in which the psychological test situation involving more limited social and material stimuli is used instead of the nursery school for recording data. The children studied ranged in age from 18 to 71 months, and the studies reported in the first four chapters were made under the informal conditions and of the spontaneous activities of the nursery schools. The subjects are as follows: the reactions of the child to material objects and to people; the actual physical contacts children make with each other; spontaneous group formation; laughter as an indication of social responsiveness, and social groupings at the preschool level. The last three sections have to do with the psychological test situation and treat (1) of personality differences disclosed in the laboratory, specifically resistance shown and the relationship between praise and success, (2) of the significance of statements of "I can't" and "I don't know" and (3) of the rapport between tester and child. In the latter case a verbatim account of the laboratory session was taken in toto.—*Harriet M. Johnson* (Bureau of Educational Experiments).

385. **Thurston, F. M. A preliminary study of the factors affecting the time taken by nursery school children to eat their food.** *J. Genet. Psychol.*, 1929, **36**, 303–318.—Observations were made for 12 weeks on 41 infants to determine the time taken for eating a standardized meal, and any factors varying with the time. The average time was 29 minutes, with

greater variation shown by the older group, and by those who had longer average time. Slender children take longer than stocky; but no correlation appeared between time and age, or time and indican output; and there were no consistently fast or slow eaters. Differences in consumption time for some of the different foods were apparent. The group as a whole tended to use long or short times on certain days, suggesting some common factor.—*J. F. Dashiell* (North Carolina).

386. **Van Alstyne, D. The environment of three-year-old children; factors related to intelligence and vocabulary tests.** *Teach. Coll. Contrib. Educ.*, 1929, No. 336. Pp. viii + 108.—Seventy-five three-year-old children selected upon the basis of eight criteria relating to parentage, age, color, residence, representativeness of IQ dispersion, etc., were studied by means of tests, questionnaires and ratings to determine the relationship between (1) various environmental factors and the mental age, IQ, and extent of vocabulary; (2) these factors and the mother's intelligence; (3) environmental factors and the subtests of the Kuhlmann Revision of the Binet Scale; and (4) the Kuhlmann intelligence test and the extent of vocabulary at the three-year-old level. Some of the major findings are: no environmental factors were found more closely related to the child's MA than to the mother's intelligence, nor were any found showing perfectly reliable differences which were higher with the mother's intelligence than with the child's; the average vocabulary comprehension was 975 words; correlations of environmental factors with the vocabulary test show a consistently higher relationship than intelligence test; the score on the Minnesota Scale of socio-economic level correlated practically as highly with the child's MA, vocabulary and the mother's intelligence as all environmental factors combined. For this investigation the author developed a vocabulary test which correlated practically perfectly with the Kuhlmann Intelligence Scale, and also devised two other scales, one to measure play material for its constructive value, the other to measure the possible "extensions of the environment" of three-year-olds according to their educational possibilities. An appendix giving case histories, the questionnaires and scales used, tables of correlations found in the study, and a bibliography of 37 titles are included.—*H. H. Remmers* (Purdue).

387. **Vygotski, L. S. II. The problem of the cultural development of the child.** *J. Genet. Psychol.*, 1929, **36**, 415–434.—Cultural development is contrasted with natural development as involving a mastery of methods and instruments; but upon analysis it proves to be reducible to the same elementary psychological operations, only structured. The genesis of structures (of forms of reasoning, of mnemonic signs, etc.), is not simply by superimposition of external forms, but expresses the child's own development. It reveals four stages: (1) primitive behavior, as remembering by sheer retention, (2) naïve behavior, as memorizing by an artificial device provided one, (3) external culture, as memorizing by external devices arranged by oneself, (4) complicated internal processes, as employing an internal mnemotechnic scheme. The instrumental method is based upon stimuli as object and stimuli as means, and as a genetic inquiry follows natural science methods.—*J. F. Dashiell* (North Carolina).

388. **Young, J. R. The changing attitudes of adolescents towards religion and the church.** *Rel. Educ.*, 1929, **24**, 775–778.—In recent years the church has been losing its hold upon adolescents. The young are skeptical of the Bible and its sanctions for conduct. The church should emphasize the concept of God as a God of physical and social as well as of moral law, and the idea that retribution is a natural result of bad conduct. The church should provide opportunities for active service in social and religious work, and present a sympathetic attitude towards the craving for independence, reasoning and joyful activity.—*J. P. Hylan* (Stoneham, Mass.).

[See also abstracts 181, 185, 254, 299, 304, 398, 400.]

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389. **[Anon.] De gemeentelijke jeugdcommissie te Amsterdam en het Duitsche jugendamt. II.** (The community commission at Amsterdam and the German bureau for the care of youth. II.) *Jeugd en Beroep*, 1929, **2**, 312–316.—The German system is described and compared with a similar one in the Netherlands. Program and method are outlined. The writer approves the more centralized German system, but feels that a gradual growth toward centralization is to be preferred to organized centralization as it is in Germany. Austria, Switzerland and America may perhaps point the way to a more perfect systematization of the care of youth.—*H. Hospers* (Western Theological Seminary).

390. **Baker, E. D. The teachers college meets individual differences.** *Childhood Educ.*, 1928, **5**, 91–98.—A description of methods used in the National Kindergarten and Elementary College to meet individual differences, through the organization of a personnel committee which collects from all available sources—tests, conferences, reports, etc.—information relating to each student and uses it to aid the individual's physical, intellectual and moral-social progress.—*M. P. Montgomery* (Faribault, Minn.).

391. **Baümer, G. Geschichtsunterricht als Mittel oder Hemmung der Völkerverständigung.** (The teaching of history as a step toward or away from the fostering of international understanding.) *Päd. Zentbl.*, 1929, **9**, 575–583.—There are three possible ways of teaching history with an idea of securing international understanding: (1) a pure and strict objectivity toward the total mass of events; (2) transplantation of moral-pedagogic goals from the national into the international sphere; and (3) selection of such subject-matter as will permit an emphasis on "peaceful" goals. Neither of the latter can be accepted: history must strive for a knowledge of truth.—*H. Marshall* (Stanford).

392. **Bennett, A. Reading ability in special classes.** *J. Educ. Res.*, 1929, **20**, 236–238.—Special class children of the primary grade in Yonkers were given a number of reading tests. 79 children were given three parts of the Gates Primary Reading Examination, the Haggerty Reading Examination and Sigma I. Their Stanford-Binet M.A.'s were known. It was found that over three-fourths of the children were achieving up to and above their mental level.—*S. W. Fernberger* (Pennsylvania).

393. **Blaisdell, J. G. Instructional tests in biology.** Yonkers-on-Hudson: World Book, 1929. Pp. 55. $0.32. (Key $0.12.)—The booklet contains 25 tests of approximately 1250 items designed to test the fundamentals of biology at intervals throughout the year. Each test is based on a definite subject such as insects, blood and its circulation, seeds and germination, etc. These tests are grouped successively into animal, human, plant and general biology with a summary test for each group. Norms are given as percentile ranks based on over 500 cases from New York, New Jersey, Pennsylvania and Oregon. A percentile table follows each test and tables are given for converting these into per cent marks. Most of the tests allow 20 minutes; some 10 and some 30 minutes. The score is the number right, or, for the true-false items, right minus wrong. The form of the tests is varied and includes completion, arranging items in order, identifying parts of diagrams and four-alternative tests. The student is provided with a forward and a tabulation sheet to show his progress in the several tests. The tests are adapted for analysis of errors and for remedial work as well as for recording progress. No data or reference to a source of data on the validity and reliability of the test is given. The key is printed on light cardboard and arranged to be folded for each test or cut into strips for each test.—*O. W. Richards* (Clark).

394. **Blatz, W. E. Discipline vs. corporal punishment.** *Childhood Educ.*, 1928, **5**, 144–149.—A good disciplinary regimen requires that the child shall develop an appreciation of the consequences of an act, a willingness to accept responsibility for them, and the relegation to the background of social approval or disapproval. Four attributes of the consequences of any act make for rapid and efficient learning: immediacy; inevitability; invariability; compatibility. Corporal punishment would be justifiable only if these conditions could be satisfied. Since this is impossible and since it violates all known laws of learning it can be regarded only as an evasion of responsibility on the part of the adult.—*M. P. Montgomery* (Faribault, Minn.).

395. **Bliss, E. H. An elastic program for five-year-olds.** *Childhood Educ.*, 1928, **5**, 61–65.—A report of the development of a program for five-year-olds at Lincoln School of Teachers College. The program was worked out with a group of 17 children through standard and informal tests, conferences with parents, and observation of individual interests. The latter included such activities as building, homemaking, care of pets, neighborhood trips, and nutrition.—*M. P. Montgomery* (Faribault, Minn.).

396. **Bobertag, O. Begabtenauslese am Berliner Abendgymnasium.** (Selection of gifted students in Berlin evening *Gymnasium.*) *Indus. Psychotechn.*, 1928, **5**, 246–247.—*A. W. Kornhauser* (Chicago).

397. **Carroll, R. P., & Jacobs, C. C. Drill in silent reading for college freshmen.** *School & Soc.*, 1929, **30**, 656–658.—28 freshmen who had failed in at least one course in the first term of their college work were given, among other things in their course of training in how to study, daily ten-minute exercises of the general order found in the Thorndike-McCall Reading Scale. The practice in reading continued for 28 days. A control group engaging in no special practice in reading and composed of teachers and graduate students took with the drill group the initial and final tests. In the period between the two tests the drill group gained in speed of comprehension 2.8 times as much as did the control group. Whereas, furthermore, the variability in the performance of the latter was greater in the last test than in the first, that of the former decreased, thus suggesting that the training in reading had served as a leveling influence.—*H. L. Koch* (Texas).

398. **Éltes, M. Egy megoldatlan gyógypaedogogiai feladat.** (An unsolved problem of clinical pedagogy.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 178–182.—The author tested by means of the Binet test 183 pupils in the public auxiliary schools of Budapest and found that there were 12.5% who were only one year or less retarded in intelligence. Except for a few children with speech and auditory defects, by far the greatest majority were morally unstable. Children of this type do not belong either in the public or in the auxiliary schools where they are a menace to other children because of their behavior; they should be segregated in special classes, where they can receive suitable training. This is still an unsolved problem of clinical pedagogy.—*D. E. Johannsen* (Wellesley).

399. **Ensor, B. Croisades dans le royaume de l'éducation.** (Crusades in the realm of education.) *Pour l'ere nouvelle*, 1929, **8**, 217–221.—The author describes the new tendencies in psychology and in the science of education which have changed the general attitude towards children.—*Math. H. Piéron* (Sorbonne).

400. **Faber, P. C. Uit de praktijk. II. Jeugdcriminaliteit en Beroepskeuze. Kees.** (From experience. II. The criminality of youth and vocational choice. "Kees.") *Jeugd en Beroep*, 1929, **2**, 272–274.—The story of a boy whose vocation was chosen for him by his mother. He was taken to a juvenile court in connection with the theft of money, which he intended to use for material for photography, in which he was interested. The vocational guidance bureau became interested in him, and discovered that he was also interested in carpentry. Training in this field was given him, and he appears to be well adjusted in the vocation which he chose

for himself.—*H. Hospers* (Western Theological Seminary).

401. **Frazee, L. Administrative aspects in meeting differences.** *Childhood Educ.*, 1928, 5, 72–77.—Homogeneous classification was introduced into the Baltimore schools without opposition by a gradual system of testing, modification of teaching and study of new literature. The plan adopted assumes the completion of the primary school by pupils of X ability in five terms, Y in six, and Z in eight. Experiments are in progress to establish norms of accomplishment for superior and slow groups. The curriculum provides for "enrichment" for all groups, dull as well as bright, in the development of personality, leadership, shared common interest and a free interaction between groups.—*M. P. Montgomery* (Faribault, Minn.).

402. **Galloway, T. W. The colleges and sex education. Report II. Departmental syllabi.** *Amer. Soc. Hygiene Asso.*, 1929. Pamphlet C, Psychology (Pub. no. 646); Pamphlet D, Sociology and social psychology (Pub. no. 647); Pamphlet G, Education and educational psychology (Pub. no. 650).—These syllabi outline the pertinent material in the field of sex problems so that it may be integrated with general and special courses in psychology.—*C. M. Louttit* (Hawaii).

403. **Germane, C. E., & Germane, E. G. Character education.** Newark, N. J.: Silver, Burdett, 1929. Pp. 482.—A theory and practice of character building is given in two parts. One is primarily for teachers, the other for parents. A cooperation between home and school is necessary to enrich the personality of the child. The first part of the book attempts to show how the school can build character and the second part to show how the school and home can cooperate in this undertaking. The child must be allowed to succeed in learning his school tasks. This is possible by careful selection of subject matter given as an assignment to direct the child's study according to the laws of learning. The case study method was used in gathering material regarding types of delinquencies found by teachers. A democratic organization of the school, such as the home room, was found to be effective in character development. Questionnaires were sent to parents asking them to list the faults of their children. The causes for these faults included the imitation of, and suggestions from adults, denial of certain inborn tendencies, failures, and physical conditions. A constructive program was proposed which would (1) take the laws of learning into consideration, (2) allow only a limited use of coercion, (3) institute a democracy in the home with certain responsibilities for each member and comradeship between the children and adults, and (4) provide good reading and good books.—*M. B. Mitchell* (Yale).

404. **Guiler, W. S. Validation of methods of testing spelling.** *J. Educ. Res.*, 1929, **20**, 181–189.—Three methods of testing spelling were used: (1) oral recall, (2) written recall and (3) multiple choice. A list of 50 words was made up from the upper range of the Buckingham Extension of the Ayres Spelling Scale. There were 781 subjects who ranged in educational maturity from the 7th grade to the first year in college. The results show that the written recall is on the whole the most effective of the three methods and that the multiple choice is the least effective. Individual differences are noted, however, and there does not seem to be any method which is best for all students. Also a composite test score derived from all of the three tests is more reliable than the score of any one of the single tests. —*S. W. Fernberger* (Pennsylvania).

405. **Hajós, L. Psychophysika az embermüvelés szolgálatában.** (Psychophysics in the service of human education.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 290–292.—The nervous system and the mind (*Psyche*) are susceptible to education. That even instincts are amenable to discipline is proven by the effect of conventions on people at large. The effect of practice and training is indicated in psychological experiments very quickly. The future problem of psychophysics lies in the determination of all the measurable phenomena both in the narrower field of nervous functions and in the broader field of mental phenomena. The author feels that psychophysics will finally become the guide and judge of the science of education.—*D. E. Johannsen* (Wellesley).

406. **Heilman, J. D. Factors determining achievement and grade location.** *J. Genet. Psychol.*, 1929, 36, 435–457.—To learn whether inheritance (mental age) or environment (school attendance and status of home) was of greater importance in determining educational age, the method of partial correlations was applied to data obtainable on these points, in the cases of 828 ten-year-old children. It was found that 57% of the individual differences in EA were traceable to the former factors, 7% to the latter, and 36% to extraneous factors. By a more cautious interpretation, the maximum influence of school training on educational age is 19%, leaving 81% attributable mainly to heredity. By similar statistical methods it was found that grade location was determined 34% by school age, 31% by educational age, 2% by mental age, and very little by socio-economic status of home. On account of the superior potency of mental endowment it is recommended that school classifications be made on the basis of it, and that educational and vocational guidance be given more attention.—*J. F. Dashiell* (North Carolina).

407. **Heimann, A., & Thorner, H. Experimentelle Untersuchungen zur Psychologie des Lesens, II. Das Lesen von sinnvollem Material.** (Experimental investigations in the psychology of reading. II. Reading of meaningful material.) *Arch. f. d. ges. Psychol.*, 1929, **71**, 165–184.—The methodology of this experiment is the same as that reported in Part I, except that the time of exposure was changed from 1/7th sec. to 1/10th sec. The ascending order for the different thresholds follows: irrational sequences in upper case (e.g., CIPHER PLUSH), ditto in lower case, rational sequences in upper case, (e.g.,

SCIENTIFIC METHOD), ditto in lower case plus preparatory word-stimulus. A study of errors showed that three times as many omissions as distortions occurred, and that they were equally distributed over the beginning, middle, and end of the presented material. The author interprets his findings as favorable to the *Gestalt* view, claiming that the total structure is the leading factor in reading words and not successive apprehensions.—*G. W. Hartmann* (Pennsylvania State).

408. **Hullfish, H. G. The relation of philosophy and science in education.** *J. Educ. Res.*, 1929, **20**, 159–165.—Science is in the ascendancy in education and the position of philosophy is becoming weaker. Philosophy has an unsavory reputation largely because the problems with which it has been concerned are of an unpractical character. This has been the fault of philosophers rather than of philosophy. The differences between science and philosophy in their methods of determining facts and in their methods of organizing them are indicated. "Science and philosophy are but different ways of dealing with facts. The former handles its facts to discover *what is;* the latter, with reference to the same facts, wants to determine *what should be.*" If this distinction is true, the author insists that any system of education which exalts one of these disciplines to the exclusion of the other is "hopelessly entangled in unimportant activity."—*S. W. Fernberger* (Pennsylvania).

409. **Jones, A. H. The prognostic value of the low range Army Alpha scores.** *J. Educ. Psychol.*, 1929, 20, 539–541.—The scholastic records of 40 entering students who made Army Alpha scores of less than 100 are studied. More than 82% of the group failed to maintain a C average during the succeeding two semesters. A program for dealing with students making low test scores is suggested.—*J. A. McGeoch* (Arkansas).

410. **Jones, V. Disagreement among teachers as to right and wrong.** *Teach. Coll. Rec.*, 1929, **31**, 24–36.—An ethical discrimination test of 68 situations was given to 118 adults interested in teaching. The test was (1) marked in accordance with the adult's own "ideal," and (2) after a twelve-hour interval, was marked in accordance with what was believed to be the "generally accepted standard." There is little agreement as to what is right and wrong in either case. In the case of marking in accordance to the generally accepted standard, the agreement is slightly less, and the judgments more lax. On the average there was a wide gap between the personal ideals and accepted standards.—*J. M. Stalnaker* (Purdue).

411. **Limp, C. E. Some scientific approaches toward vocational guidance.** *J. Educ. Psychol.*, 1929, **20**, 530–536.—Tests for ability in shorthand and in typewriting give an average error of prediction, in terms of school marks for over 1000 high school students, of 6.3 for shorthand and 5.2 for typewriting. The tests are described, and the regression equations for shorthand and typewriting and a table for computing the predicted scores are given.—*J. A. McGeoch* (Arkansas).

412. **Luzuriaga, L. El juego y el trabajo en la educación.** (Play and work in education.) *Rev. de ped.*, 1929, **8**, 411–415.—*J. W. Nagge* (Chicago).

413. **Michels, F. A siketek szamtantanításának módszertana.** (Instruction in arithmetic for the deaf.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 183–192.—Ranschburg and his students have shown that the deaf-mutes are far behind normals and even the blind in their capacity for doing arithmetic quickly and accurately, although they naturally have a tendency to visual imagery as opposed to the auditory imagery of the blind. This result is peculiar in view of the relative importance of imagery types in influencing this capacity which was found by Ranschburg to be: visual type, + 3, motor (including kinesthesis), + 2, but auditory, — .5. Consequently, this poor showing of the deaf must be blamed on poor instruction. Instruction in arithmetic in this case presents two important practical problems, (1) to develop in the deaf an automatic capacity for using the symbols of arithmetic, both oral and written, and (2) to make him capable of speedy and accurate arithmetical performance.—*D. E. Johannsen* (Wellesley).

414. **Miles, W. R., & Segel, D. Clinical observation of eye movements in the rating of reading ability.** *J. Educ. Psychol.*, 1929, 20, 520–529.—The eye-movements of a group of 59 unselected Grade III pupils were studied by the Miles peep-hole method. The best readers showed fixation durations corresponding closely to those of adults. They made almost no regressive movements, showed hardly any confusion intervals, and made little or no head movement or lip movement. The very poor readers "require ten-fold as much time to cover the same material, use twice as many fixations, make many regressive fixations and conspicuously show head movements and lip movements." The correlations between the clinical results, the Gates reading tests, and teachers' ratings ranged from 0.66 to 0.84. The time scores on two different sections of reading material correlated 0.90.—*J. A. McGeoch* (Arkansas).

415. **Mills, L. The functions of the eyes in the acquisition of an education.** *J. Amer. Med. Asso.*, 1929, 93, 841–845.—Present day education places an undue emphasis upon speed. Constant pressure is put upon school children to maintain a miscalled maximum efficiency. The result is a large variety of conduct disorders and the production of poor memory for details. In the field of reading, the demand for speed has led to the theory that the acuity of peripheral vision can be increased, as well as the area of foveal vision. As a matter of fact, however, maximum vision occurs only in a small area at the center of the fovea, with a uniform decline of visual acuity even inside the limits of the fovea. The experience of physicians with lesions that destroy central vision has shown that neither the macula nor the area about it has any capacity for acquiring additional visual power, breadth, or quality to what it has naturally, and that peripheral vision never even remotely possess the qualities natural to normal central vision. Fast readers comprehend better than

slow ones because of a better intellectual endowment, not because of training. Attempts to enlarge the span of visual acuity lead not infrequently to eye troubles. Exophoria more often results in the restless, nervous child, and esophoria in the deeply intense child. The mental habit appears to be the main factor in determining the form of ocular deviation. Poor memory is a common and outstanding fault in myopia with exophoria. The process of accommodation and convergence is primarily an attention reflex. Much eye disturbance in youth results from a lack of sufficient interest to arouse one to the pitch of seeing sharply. The introduction of moving pictures in education is aiding in the elimination of this difficulty.—*G. J. Rich* (Boston Psychopathic Hospital).

416. **Nagy, L. A paedagogiai-psychologiai vizsgálatok célja és módszere.** (The purpose and method of the pedagogical-psychological tests.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 193–202.—The author suggests the founding of a new science (*Studium*), pedagogical biology. He emphasizes the fact that the individuality of the child must be made the central point of pedagogical technique, and points out that this demands a thorough understanding of the child's physical and mental structure. The two problems of the pedagogical-psychological tests are the determination of the quantity and the quality of the capacities, and an inner connection between the two should prevail. Adopting this principle of relativity does not mean giving up the principle of objectivity, but rather the combination of the two. From the test results are worked out the psycho-biograms and the psychological profile, but it must not be forgotten that the latter indicates only the quantitative results; the qualitative results must also be carefully analyzed and the former should incorporate them, giving an individual picture of every child.—*D. E. Johannsen* (Wellesley).

417. **Polak, A. Verscheidenheid van aanleg.** (Diversity of talent.) *Jeugd en Beroep*, 1929 2, 302–305.—The applications of female graduates of colleges, high schools, and grammar schools at the vocational bureaus show that girls do not lack preferences as to their future vocations, and that a disposition toward housekeeping is not predominant. This fact obligates parents to develop as fully as possible any specific talents their daughters may possess.— *H. Hospers* (Western Theological Seminary).

418. **Pratt, H. G., Dunlap, J. W., & Cureton, E. E. The subject-matter progress of three activity schools in Hawaii, with a note on statistical technique.** *J. Educ. Psychol.*, 1929, 20, 494–500.—In three schools a teaching procedure characterized by the following features was used: "A deliberate attempt to find and work out activities which were real in the lives of the children, an increase in the types and variety of reading material used, informal procedure, within the limits of the bondage of the traditional desks, and an emphasis upon social rather than specific subject-matter values." Stanford Achievement Tests, Form A, were given to Grades II to VIII at the beginning of this program and were repeated (Form B) after periods varying from 7 to 13 months. The published norms are taken as controls and statistical methods are worked out to permit this. It is concluded that "on the things which the Stanford Achievement Test measures, there was no significant loss, and in the case of the youngest groups in two of the schools, there was signficant gain. All three schools maintained about the same rate of subject-matter progress under the new program as under the old."—*J. A. McGeoch* (Arkansas).

419. **Roubinovitch, J. L'hygiène mentale et l'école.** (Mental hygiene and the school.) *Prophyl. ment.*, 1929, 6, 63–74.—In providing for the moral, physical, and intellectual growth of the child, the school makes many contacts with the field of mental hygiene. Mental hygiene has long been interested in relationship between physical growth and mental development. The anthropologist, Gobin, has studied the problem of increase in height and weight of French children. His curves show steady gain in height up to the third year. From the third to the sixth year, there is very slow increase. Another spurt occurs at the seventh year, and a final spurt comes between the 12th and 15th year. After the 15th year, height increases slowly and weight progressively. At the age of 15, girls have shown more rapid growth in height than boys. During the plateau period in the height curve, the "memory" curve rises rapidly. Memory ability is then diminished during the period of most rapid growth. The growth "crises" appear at 7 and at 14 years when education puts the most difficult intellectual work on the child. There is a direct relationship between ability to do intellectual work and physical development of the child. Children overworked mentally are usually suffering from some physical ailment. The author advocates physical culture as the best means of accomplishing simultaneous development of good character, active intelligence, and good health.—*D. M. Olson* (Clark).

420. **Russell, W. F. School administration and conflicting American ideals.** *Teach. Coll. Rec.*, 1929, 31, 17–23.—The school administration seeks to adjust itself to two national ideals, liberty and equality. The solution of the resulting conflict is to "sever from the national and state governments powers which threaten the liberties of the people; and . . . render unto the state and nation power making for equality of opportunity."—*J. M. Stalnaker* (Purdue).

421. **Sammartino, P. A standardized test in modern languages.** *J. Educ. Res.*, 1929, 20, 231–233.—The test aims to measure the student of French at any time during his first two years of learning. It consists of vocabulary, grammar and comprehension tests, in a multiple choice form. Distribution tables for each of the three parts obtained from 1000 pupils at the Jamaica High School are given.—*S. W. Fernberger* (Pennsylvania).

422. **Savage, H. J., Bentley, H. W., McGovern, J. T., & Smiley, D. F. American college athletics.** *Carnegie Found. Adv. Teach.*, 1929, Bull. 23. Pp. xxii + 383.—After a statistical study of 18,667 students in 111 universities and colleges the authors do

not find that the athletes are poorer students than the others.—*R. Stone* (Lehigh).

423. **Stainer, W. J. A speed accuracy competition.** *Brit. J. Psychol.*, 1929, **20**, 82–89.—This experiment was designed to ascertain what improvements could be made in arithmetical work and in spelling by the systematic use of definite tests accompanied by various carefully selected forms of stimuli, including the award of a Speed-Accuracy House Cup. There was marked and general improvement not only in the tests but also, in the opinion of the teachers, in the general school work. There were marked seasonal variations.—*H. Banister* (Cambridge, England).

424. **Stenquist, J. L. The research bureau meets individual differences.** *Childhood Educ.*, 1928, **5**, 78–90.—In the Baltimore schools selected teachers are trained by the Bureau of Research to act as local primary examiners, administering tests for ability classification. A kindergarten record card has been devised by which the teacher rates pupils on such abilities as story telling and singing. A first grade achievement card records the teacher's opinion of achievement in personal and social qualities as well as in reading and number. In the second and third grades standard achievement tests are used. The Bureau has devised teacher's class analysis charts designed to summarize the results with a maximum of detail and a minimum of labor. Another invention of the Bureau is the packet record system by which a pupil's complete record is made available with the least amount of clerical effort.—*M. P. Montgomery* (Faribault, Minn.).

425. **Stone, C. R. A non-reader learns to read.** *Elem. School J.*, 1929, **30**, 142–147.—This article presents a detailed analysis of probable causes, needs, and remedial treatment of a 7-year-old boy, a disability case in reading.—*P. A. Witty* (Kansas).

426. **Symonds, P. M., & Lee, B. Studies in the learning of English expression. III. Vocabulary.** *Teach. Coll. Rec.*, 1929, **31**, 50–58.—A study of the growth of vocabulary usage in written composition by an analysis of 539 compositions, totalling 96,752 words. The words for each composition were tabulated according to the Thorndike frequency (*Teacher's Word Book*) and then sorted into groups according to their level on the Hillegas scale. A table and graph are given which "should be of assistance to curriculum builders, textbook writers, and teachers in planning the course of study."—*J. M. Stalnaker* (Purdue).

427. **Thomson, G. H. A modern philosophy of education.** New York: Longmans, Green, 1929. Pp. 283. $3.50.—*W. S. Hunter* (Clark).

428. **Thorner, H. Experimentelle Untersuchungen zur Psychologie des Lesens. I. Das Lesen von sinnleerem Material.** (Experimental investigations in the psychology of reading. I. Reading of meaningless material.) *Arch. f. d. ges. Psychol.*, 1929, **71**, 127–164.—Simple Latin letters were presented in Pauli's tachistoscope to five subjects. The instrument was released by the subjects, and the span of prehension obtained by oral reproduction. Threshold values were calculated by an adaptation of the constant stimuli method used in psychophysics. The mean thresholds obtained were arranged in the following ascending hierarchy: disconnected letters, disconnected letters with dominance (i.e., letters like *t* and *p* which extend beyond the usual plane of writing), disconnected capitals, pronounceable combinations, pronounceable combinations with compound consonants (like *ch*), etc. Variability increases with the increase in the number of factors operating. If the stimuli increase in magnitude gradually, the threshold itself can be raised to a greater value than that obtained from irregular series. Dominant letters heaped in the center of a visual series inhibit the span; when placed at the extremes they facilitate it. Capitals raise the threshold with disconnected items, but lower it with pronounceable material. The author objects to the usual comparison of sense and nonsense material by means of ratios, claiming that the factors of dominance and pronounceability are all-important. There is a greater percentage increase in the threshold from one type of nonsense presentation to another than there is from this class to the meaningful variety.—*G. W. Hartmann* (Pennsylvania State).

429. **Tóth, Z. Ranschburg és a gyógypaedogogia fejlödése.** (Ranschburg and the development of clinical pedagogy.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 203–209.—The author attempts to answer, by referring to the work of Ranschburg and that of his students, the three questions: (1) For what must clinical pedagogy thank Ranschburg and his laboratory? (2) What does he mean to clinical pedagogues as head of the *Heilpädagogische Hochschule?* (3) What are the results of his social activity?—*D. E. Johannsen* (Wellesley).

430. **Van Det, E. J. Het bureau voor beroepskeuze te Weenen in 1928.** (The bureau of vocational choice at Vienna in 1928.) *Jeugd en Beroep*, 1929, **2**, 257–263.—The remarkable correspondence between the bureaus of vocational choice in the larger cities such as Berlin, Frankfort, Amsterdam, Vienna, etc., is noted. The likeness shows itself principally in the three aspects of their organization: guidance, locating, subsequent care. A statistical comparison of the bureaus in Vienna and Amsterdam is given, covering age of applicants for guidance, degree of education, relations of bureau to school, degree and nature of organization, and system of organization.—*H. Hospers* (Western Theological Seminary).

431. **Van Det, E. J. Een psychologisch inspectoraat te Montpellier.** (A psychological inspectorate at Montpellier.) *Jeugd en Beroep*, 1929, **2**, 294–298.—The matter of division into classes, promotion, and transfer to other schools has a threefold aspect: pedagogical, medical, and psychological. Montpellier is the first city which has entrusted the psychological side of the matter to a separate inspector. Dr. Vera Kovarsky has recently been appointed to this office, in cooperation with the medical and pedagogical authorities. Psychological

inspection from the beginning of school training makes it possible to distinguish normal from abnormal children, and also gives a basis for vocational advice at the time when the child leaves the lower grades of school.—*H. Hospers* (Western Theological Seminary).

432. **Wackerhausen, J. F. Uit de praktijk. I. Een "moeielijke" jongen.** (From experience. I. A perplexing youth.) *Jeugd en Beroep,* 1929, **2,** 269–272.—An account of a boy who was placed with the bureau of vocational guidance at the age of 12. Though intelligent, he was shiftless, sensitive, and quick tempered. By means of careful supervision and the expression of confidence on the part of the bureau, the boy seems likely to succeed in his work.—*H. Hospers* (Western Theological Seminary).

433. **Werner, O. H. Every college student's problems.** Newark, N. J.: Silver, Burdett, 1929. Pp. xi + 370 + xxix. $3.00.—This book is an outcome of the author's advisory and teaching experiences with college students over a number of years. Considerable evidence is marshalled to show the gravity of the obligation of the college to its students and that the colleges are coming to be more and more conscious of this responsibility. Each chapter has an appended list of questions, exercises and selected references.—*M. B. Jensen* (Michigan Central State Teachers College).

[See also abstracts 14, 81, 181, 189, 291, 295, 304, 322, 352, 353, 358, 364, 371, 373, 374, 378.]

BIOMETRY AND STATISTICS

434. **Courtis, S. A. Maturation units for the measurement of growth.** *School & Soc.,* 1929, **30,** 683–690.—The author defines simple growth as the progress toward a definite maturity which takes place in an immature organism of constant nature when it reacts to constant nurture under constant conditions. It is alleged that all curves describing this growth are identical in form differing only in the total time required for maturation and are precisely represented by the exponential equation, $y = kge^x$, in which x refers to the variable time. Assuming the growths accomplished in equal units of time to be equal, the author proposes the use of maturation units or isochrons in the studies of growth in its fundamental outlines. He also points out that the employment of isochrons reduces the exponential equation given above to the simple and more readily manipulable linear equation, $y = r_1t_1 + s_1$.—*H. L. Koch* (Texas).

435. **Daniell, P. J. Boundary conditions for correlation coefficients.** *Brit. J. Psychol.,* 1929, **20,** 190–194.—In this paper the question is attacked in a simpler manner which permits an immediate extension to n variables and to the case of factors each common to p of the n variables.—*H. Banister* (Cambridge, England).

436. **Dunn, H. L. Application of statistical methods in physiology.** *Physiol. Revs.,* 1929, **9,** 275–398.—A comprehensive review of statistical methods as applied in the field of physiology. Bibliography of 694 titles.—*M. F. Fritz* (Iowa State College).

437. **McEwen, G. F. Methods of estimating the significance of differences in or probabilities of fluctuations due to random sampling.** *Bull. Scripps Instit. Oceanography, Technical Ser.,* 1929, **2,** 1–137.—Formulae, illustrations, and tables are given which elucidate methods of determining the probable effects of sampling errors on differences in proportions and averages when the probabilities based on the "normal law" may not apply and when the N is small. The method of obtaining the significance of the difference between two proportions is based upon Pearson's formula derived from Bayes's theorem. An extensive table is given which is an aid in the computation of the necessary probabilities. The author's own method of estimating the significance of the difference between two averages by computing the probability of the occurrence of a difference between certain "group proportions" in each sample does not involve the hypothesis of normality in the two populations. This method likewise makes use of the Bayes-Pearson formula, an exact derivation of which is given, as well as certain approximate expressions. "Student's" method of estimating the unreliability of a difference between averages when N is small and the populations not extremely non-normal is illustrated, and a table to facilitate computations in samples where N is less than 30 is given. In addition, four other short methods related to that of "Student" are described. Several short methods of summing terms of the skew binomial are illustrated.—*R. C. Tryon* (California).

438. **Von Foerster, J. F. Rechenhilfsmittel zur Berechnung von Σd^2, A.M. und M. V. sowie für fortlaufende Uhrablesungen.** (Calculating aids for computing Σd^2, A.M. and M. V. and for making continuous readings from a clock.) *Indus. Psychotechn.,* 1928, **5,** 338–341.—*A. W. Kornhauser* (Chicago).

[See also abstracts 332, 440.]

MENTAL TESTS

439. **Cole, R. D. A conversion scale for comparing scores on three secondary school intelligence tests.** *J. Educ. Res.,* 1929, **20,** 190–198.—The paper presents conversion scales for comparing the scores of the Terman Group Tests of Mental Ability, the Otis Group Intelligence Test, Advanced Examination and the Otis Self Registering Test. The scales are made up from scores of 6550 pupils from 14 preparatory schools. The transmutation formula given by Holzinger was used. The conversion scales are given in three tables.—*S. W. Fernberger* (Pennsylvania).

440. **Cureton, E. E., & Dunlap, J. W. A nomograph for estimating the reliability of a test in one range of talent when its reliability is known in another range.** *J. Educ. Psychol.,* 1929, **20,** 537–538.—The nomograph is to facilitate the solution of Kelley's equation connecting the reliabilities and standard deviations of a test in two ranges of talent.—*J. A. McGeoch* (Arkansas).

441. **Garrison, K. C. Further studies in various types of speed performances as related to mental**

ability. *J. Genet. Psychol.*, 1929, **36**, 344–349.—Tabulated correlations between scores on a variety of vocal, manual, and printed form tests are generally low except between tests of a common type (as vocal naming with vocal naming, cancellation with substitution, etc.). Speed would appear to be a function of the activity in a particular task.—*J. F. Dashiell* (North Carolina).

442. **Hovey, H. B. Measures of extraversion-introversion tendencies and their relation to performance under distraction.** *J. Genet. Psychol.*, 1929, **36**, 319–329.—Subjects were tested on Army Alpha forms with and without visual and auditory distractions, and were also graded for extraversion-introversion on the basis of Conklin, Laird, and Freyd-Heidbreder questionnaires. It was found that extraversion-introversion and distractibility were not related. The three measures of extraversion-introversion showed small agreement with each other, and none at all with intelligence. There was some evidence that extraverts do better on numerical and introverts better on linguistic tasks.—*J. F. Dashiell* (North Carolina).

443. **Kovarsky, V. Le rôle de la méthode du profil psychologique dans l'orthopédie psychique.** (The rôle of the psychological profile method in psychological orthopedia.) *Psychol. et vie*, 1929, **3**, 172.—The psychological profile method gives information on the subject's lacunae and his strong or weak points. When repeated at regular intervals, the test guarantees a knowledge of the amelioration or the aggravation of the subject's intellectual state and information on the stages of his development.—*Math. H. Piéron* (Sorbonne).

444. **Kronfeld, A. Das psychologische Experiment in der ärztlichen Praxis.** (Psychological experimenting in the physician's practice.) *Psychol. Stud.* (Ranschburg-Festschrift), 1929, 227–254.—Although the author feels the importance for a doctor of an understanding of physiology, he points out the use which may be made of psychological tests and emphasizes the value of such tests from a practical point of view. The difficulties of the psychological method, its time-consuming nature, and expense, can be largely overcome by the use of the "test method." Such tests make possible an investigation of intelligence, character, temperament, etc., by a fairly quick and objective technique. The author emphasizes the fact that clinical observation and experimental tests must work together. The tests used are mainly familiar standard tests and 2 case studies are given in detail in order to show the type of problem which may be solved by the application of this method.—*D. E. Johannsen* (Wellesley).

445. **Oates, D. W. Group factors in temperament qualities.** *Brit. J. Psychol.*, 1929, **20**, 118–136.—This investigation was undertaken to examine the nature of the temperamental qualities functioning in the tests. Four sets of tests: (a) Downey Will-Temperament Tests, (b) School Terminal Examination marks, (c) a battery of ten different intelligence tests and (d) handicraft tests, were given to pupils in a secondary school. Analysis of the results shows that the temperament tests correlate with the examination results but not with the results of the intelligence tests; and appears to justify the conclusions (1) that the common factors are general emotionality and a general intelligence; (2) that besides the factor of general emotionality there are two group factors of a "repressed" and "unrepressed" type, determined, it is suggested, by the relative predominance of the aggressive or the inhibitive group of instincts; (3) that the general temperamental or emotional factor is identified with the emotional energy underlying all the instincts, and the group factors are determined by the subordinate groupings of the instincts with their specific energies, thus confirming Burt's views.—*H. Banister* (Cambridge, England).

446. **Radecki, W. Test de intelligencia para adultos.** (Intelligence tests for adults.) *Ann. da Colon. de Psychopath.*, 1928, **1**, 323–346.—*J. W. Nagge* (Chicago).

447. **Reynier, M. Les tests de caractère.** (Character tests.) *Pour l'ere nouvelle*, 1929, **8**, 117.—In order to establish correct diagnostics for children, it is necessary to add to intelligence and aptitude tests certain character tests showing to what degree the children are able to take advantage of what they know. The author believes that a child's character can be determined by his responses to certain simple questions on preference.—*Math. H. Piéron* (Sorbonne).

448. **Sáinz, F. La medida de los fenómenos anímicos.** (The measurement of mental phenomena.) *Rev. de ped.*, 1929, **8**, 404–411.—The author discusses a few of the problems of mental measurement and outlines a few of the statistical devices.—*J. W. Nagge* (Chicago).

449. **Symonds, P. M. Choice of items for a test on the basis of difficulty.** *J. Educ. Psychol.*, 1929, **20**, 481–493.—Six propositions about the choice of test items on the basis of difficulty, with equal validity assumed, are laid down and illustrated, and their implications discussed. (1) "The items with which one can measure the ability of an individual most accurately are the items that he can do with fifty per cent accuracy." (2) "The test which measures an individual most accurately is one made up of items all of which have a difficulty which the individual can solve with fifty per cent accuracy." (3) "The best item for measuring two individuals is the item lying in difficulty midway between the difficulty of the two items which can be answered with fifty per cent correctness by each of the individuals." (4) The best test for measuring two individuals is one composed of items as in (3). (5) "The best test for measuring a typical school grade or class is a test in which all of the items have a difficulty such that they can be answered with fifty per cent accuracy by the average individual of the group." (6) "The best test designed to measure several consecutive grades or classes is one in which the items have been so selected that they range evenly in difficulty from the level of difficulty which can be done

with fifty per cent accuracy by the average member of the lowest group to be tested to the level of difficulty which can be done with fifty per cent accuracy by the average member of the highest group to be tested."—*J. A. McGeoch* (Arkansas).

450. **Talbott, E. O., & Ruch, G. M. The theory of sampling as applied to examinations.** *J. Educ. Res.*, 1929, **20**, 199–206.—The claim has been made for the examination in essay form that it encourages the pupil to write on a number of topics and that he must organize his thought and language in a logical, coherent and pertinent form. After discussing certain theoretical aspects, the authors present some experimental data. A test in essay form was followed the next day by a very long objective test on the same data with simple recall, multiple choice and true-false sections. The results show that on the average, the essay question calls forth less than half of the pupil's knowledge of a given subject. The sampling varies from 25% to 77%. Also the essay examination takes approximately twice as long as the objective test for a given unit of subject matter if the topic be treated exhaustively. "Since the essay examination requires twice as much time and evokes less than half as much knowledge, the objective test is from four to five times as efficient as a device for sampling."—*S. W. Fernberger* (Pennsylvania).

451. **Vernon, P. E. Tests of temperament and personality.** *Brit. J. Psychol.*, 1929, **20**, 97–117.—The Downey tests are unsatisfactory for many reasons; they are too objective and scientifically orthodox to be psychologically sound. The quantitative estimates of personality and temperament must be supplemented by qualitative observation and intuition. The results obtained from observations of the remarks and behavior of a few subjects when given temperament performance tests and games are described. In particular esthetic and scientific constructive interest, planning capacity, emotional instability and variability, extraversion, introversion, suggestibility and persistence were evidenced, and agreed with the individual's characteristics in real life.—*H. Banister* (Cambridge, England).

452. **Vickers, W., & Hoskin, V. H. Results from some new tests of practical abilities.** *Brit. J. Psychol.*, 1929, **20**, 66–81.—A battery of 14 tests of practical abilities was devised. These tests were tried out first of all on 115 school children and were then given to 129 workers. They did not give results in complete agreement with ability as estimated by the foremen. This was found to be due to the fact that, whereas skill in the operation tested increases progressively up to the age of 56, intellectual ability, when tested in a practical situation, increases to a maximum at 25 and then decreases. Hence the importance, when preparing trade tests, of using a uniform age group for their standardization.—*H. Banister* (Cambridge, England).

[See also abstracts 226, 235, 299, 322, 332, 333, 337, 346, 351, 386.]